

# FIG. 1

Sending Device

Receiving Device

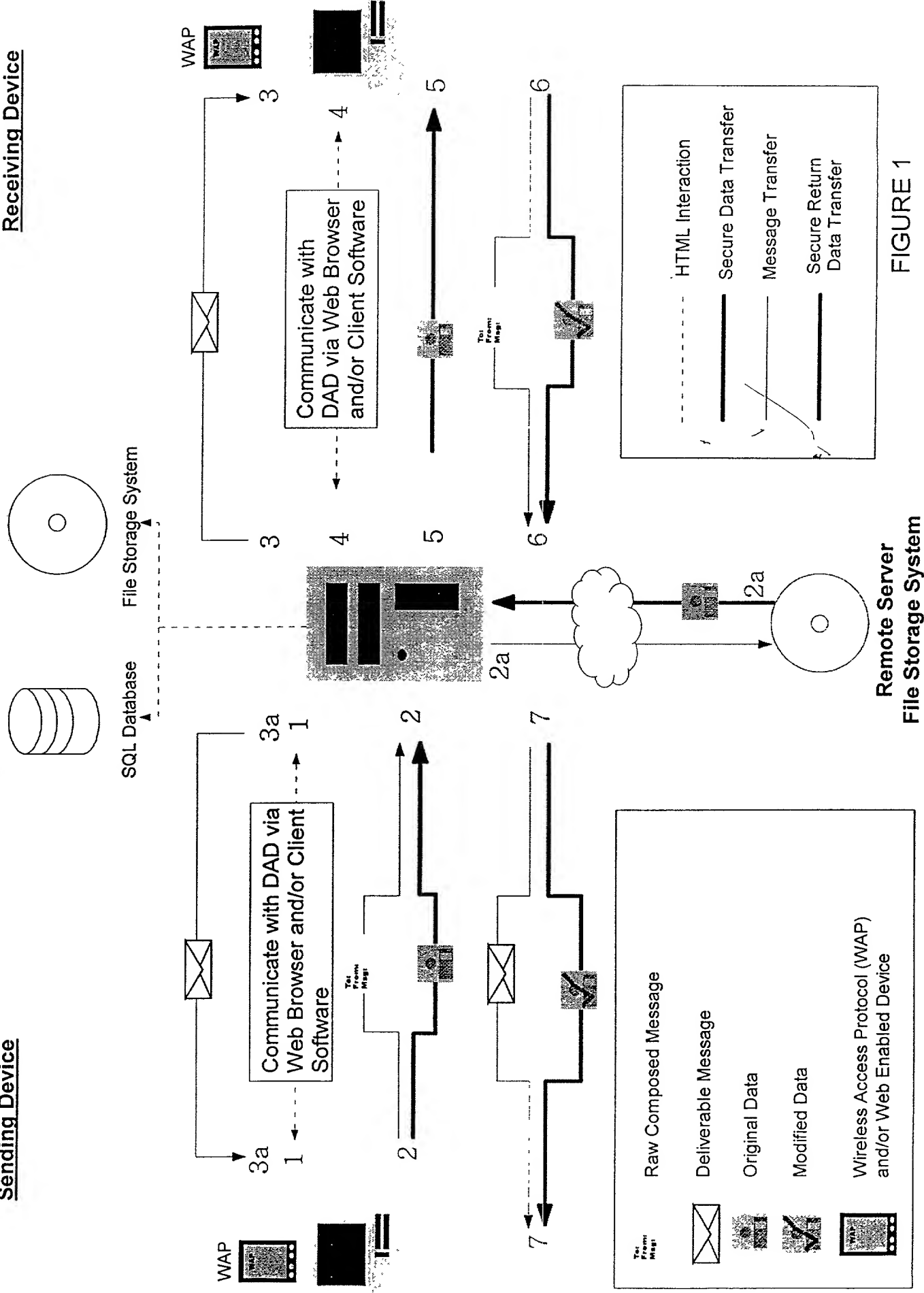


FIGURE 1

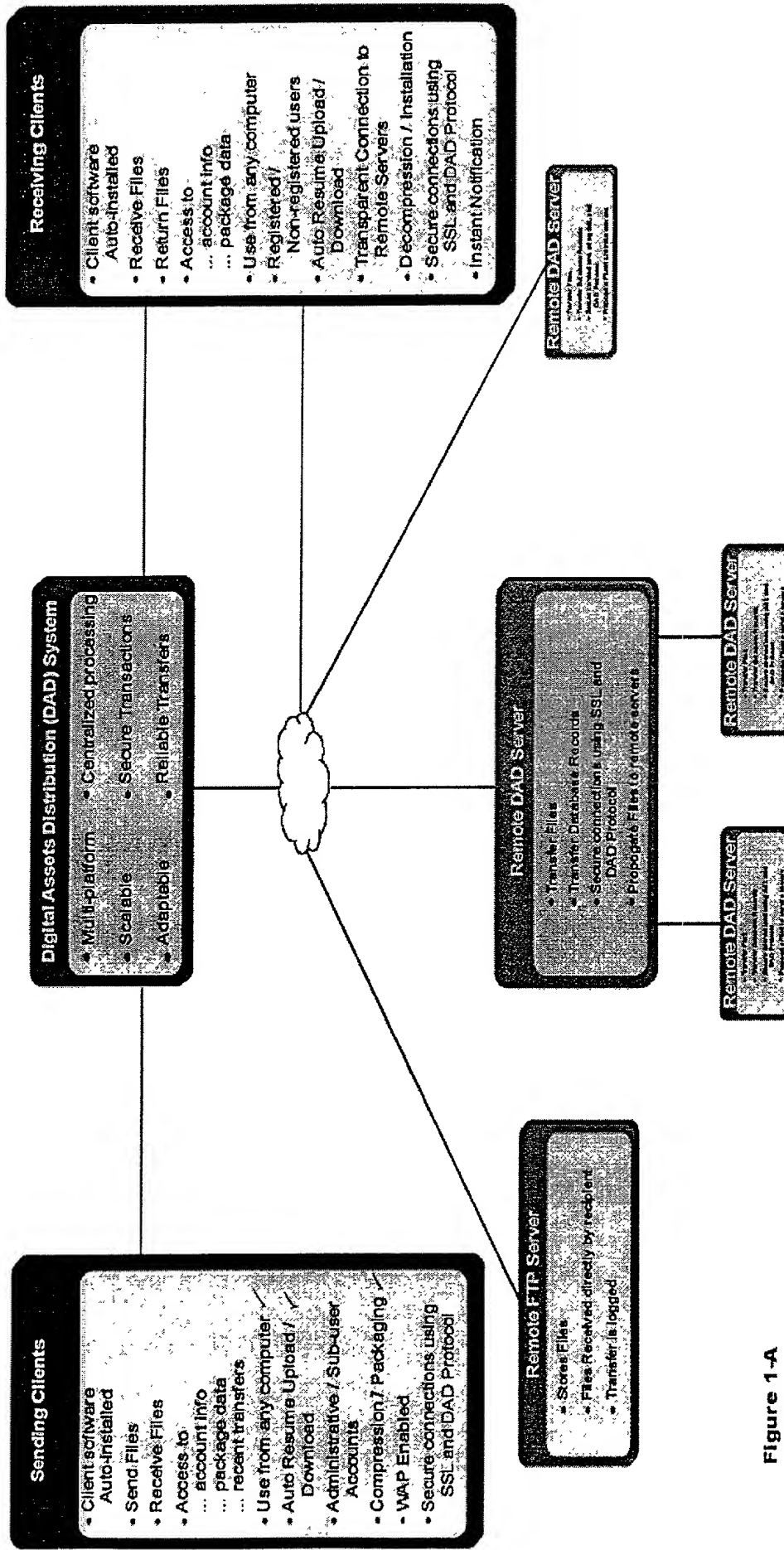


Figure 1-A

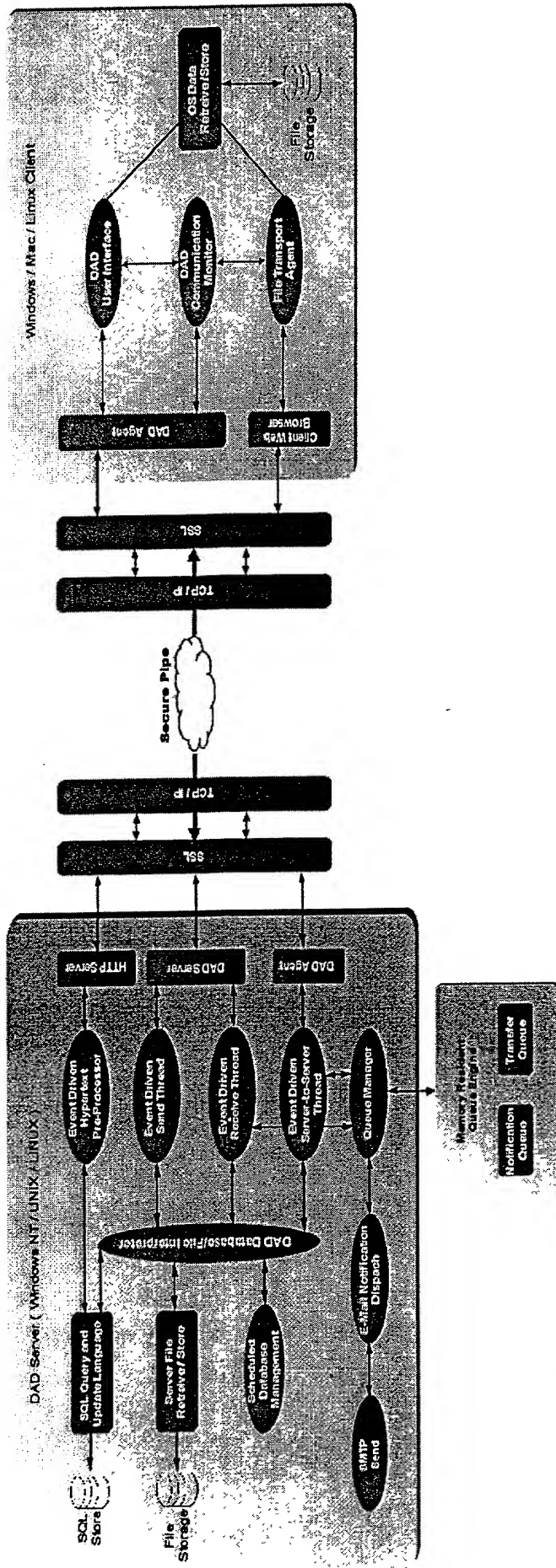


Figure 1-B

10

ACCOUNT

UID (11)  
AID (12)  
LID (13)  
ACCOUNT NAME (14)  
PASSWORD (15)  
ACCOUNT TYPE (16)  
ACCOUNT LEVEL (16A)  
ADDRESS  
PHONE  
FAX  
EMAIL (17)  
CURRENT PID (18)  
EXPIRATION (19)  
LIMIT1 (19A)  
LIMIT2 (19B)  
ATTR1 (19C)  
ATTR2 (19D)  
USERLEVEL  
ADMINID  
TRACKING INFORMATION  
QUOTA SETTINGS  
BILLING INFORMATION

20

PACKAGE

PID (21)  
SENDER UID (22)  
RECIPIENT UID[] (22A)  
SID[] (23)  
DID[] (23A)  
STATUS  
FILENAME (24)  
CLIENT FILE LOCATION (25)  
XFR FILE PATHNAME (26)  
SENDER XFR FILE PATHNAME (26A)  
XFR FILESIZE (27)  
UPLOAD OFFSET (28)  
RETURN ENABLED (29)  
COMPRESSION OPTIONS (30)  
ENCRYPTION OPTIONS (31)  
ARCHIVING OPTIONS (32)  
PACKAGE TYPE (33)  
NOTIFY METHOD (34)  
NOTIFY INSTRUCTIONS (35)  
OTHER PID (36)  
INSTALLATION OPTIONS (37)  
PASSWORD (38)  
EXPIRATION (39)  
LIMIT1 (39A)  
LIMIT2 (39B)  
ATTR1 (39C)  
ATTR2 (39D)  
TRACKING INFORMATION  
ACCOUNTING INFORMATION

40

ADDRESS BOOK

AID  
UID[]

70

DOWNLOAD

DID (71)  
PID  
RECIPIENT UID  
EXPIRATION (72)  
LIMIT1 (72A)  
LIMIT2 (72B)  
ATTR1 (72C)  
ATTR2 (72D)  
TRACKING INFORMATION

60

SERVER LIST

LID  
SID[]

50

SERVER SITE  
SID (51)  
SERVER NAME  
SERVER IP  
SERVER PORT  
FTPUSER  
FTP PASSWD  
FTP ACCOUNT  
FTP INIT  
DIRECTORY  
FTP FIREWALL

UID - ACCOUNT ID  
PID - PACKAGE ID  
SID - SITE ID  
AID - ADDRESS ID  
LID - SERVER LIST  
DID - DOWNLOAD ID

FIGURE 2

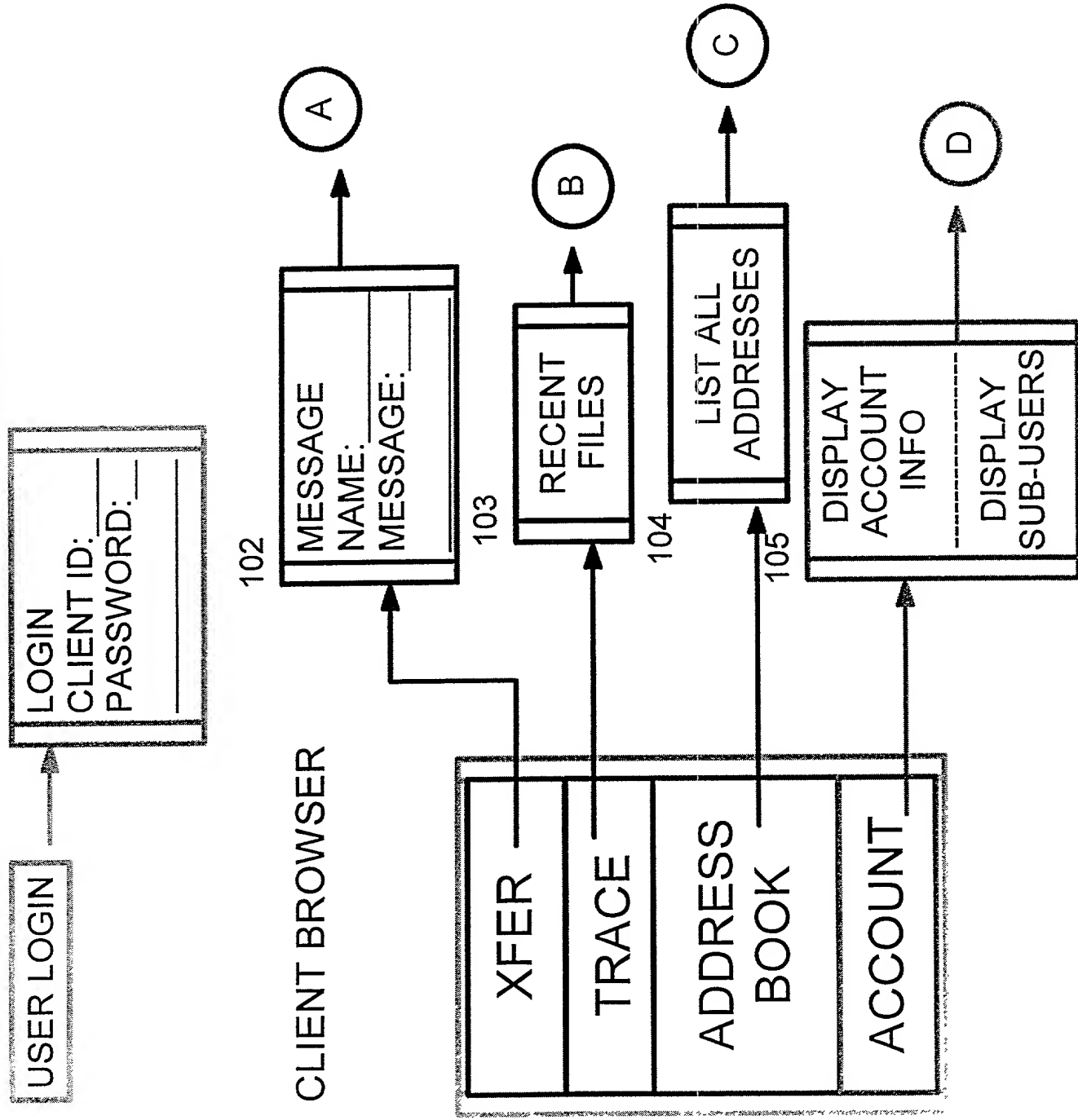


FIGURE 3

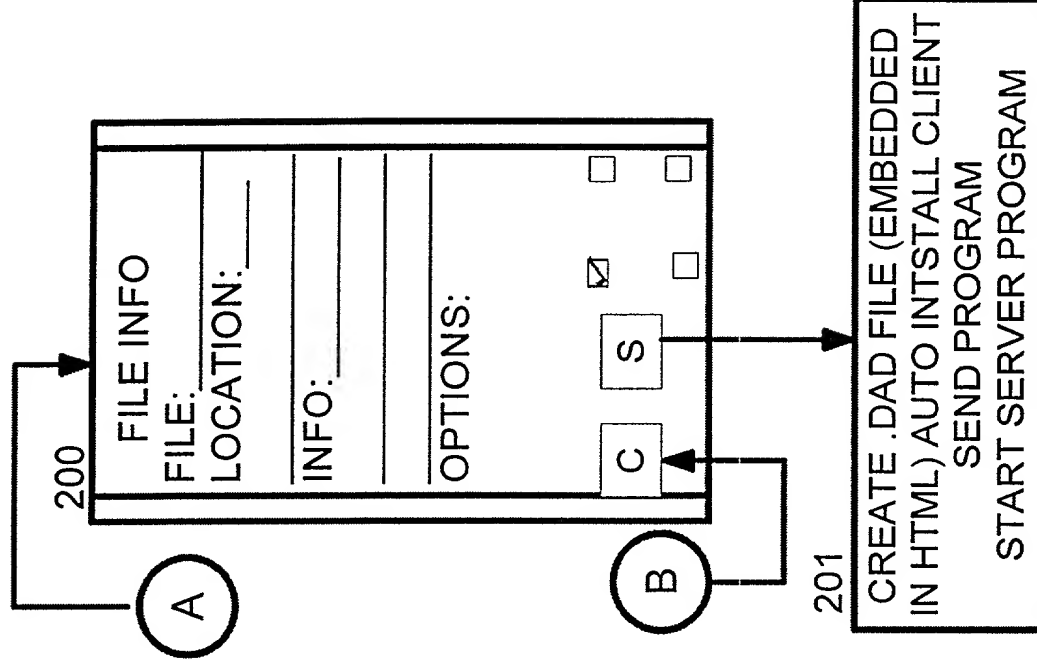


FIGURE 3-A

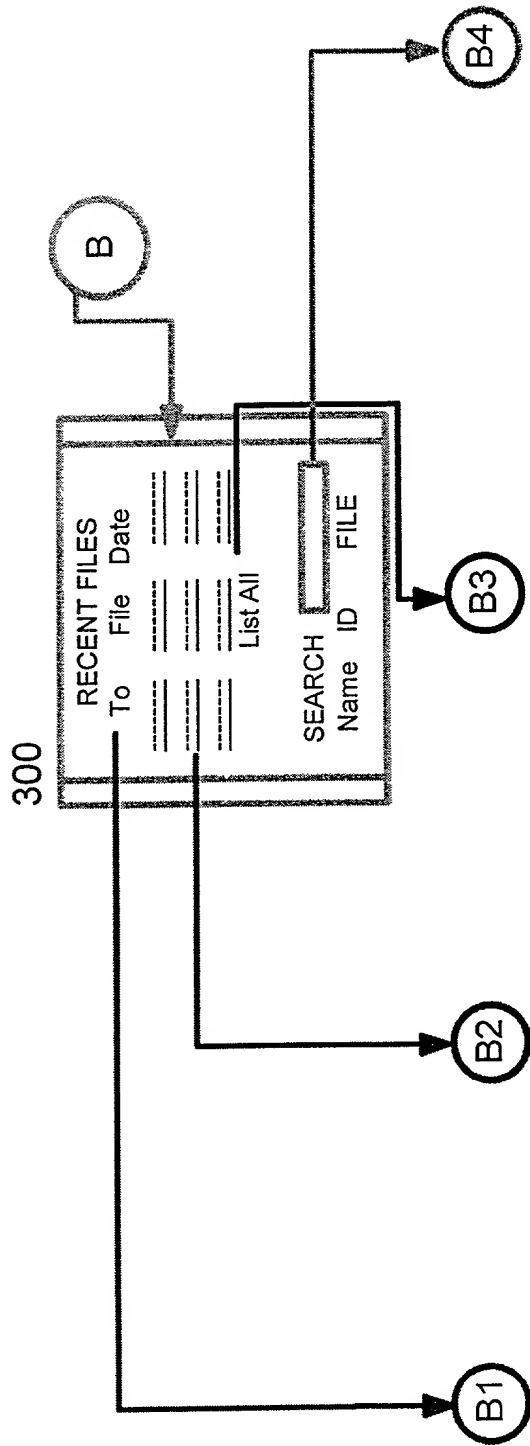


FIGURE 3-B

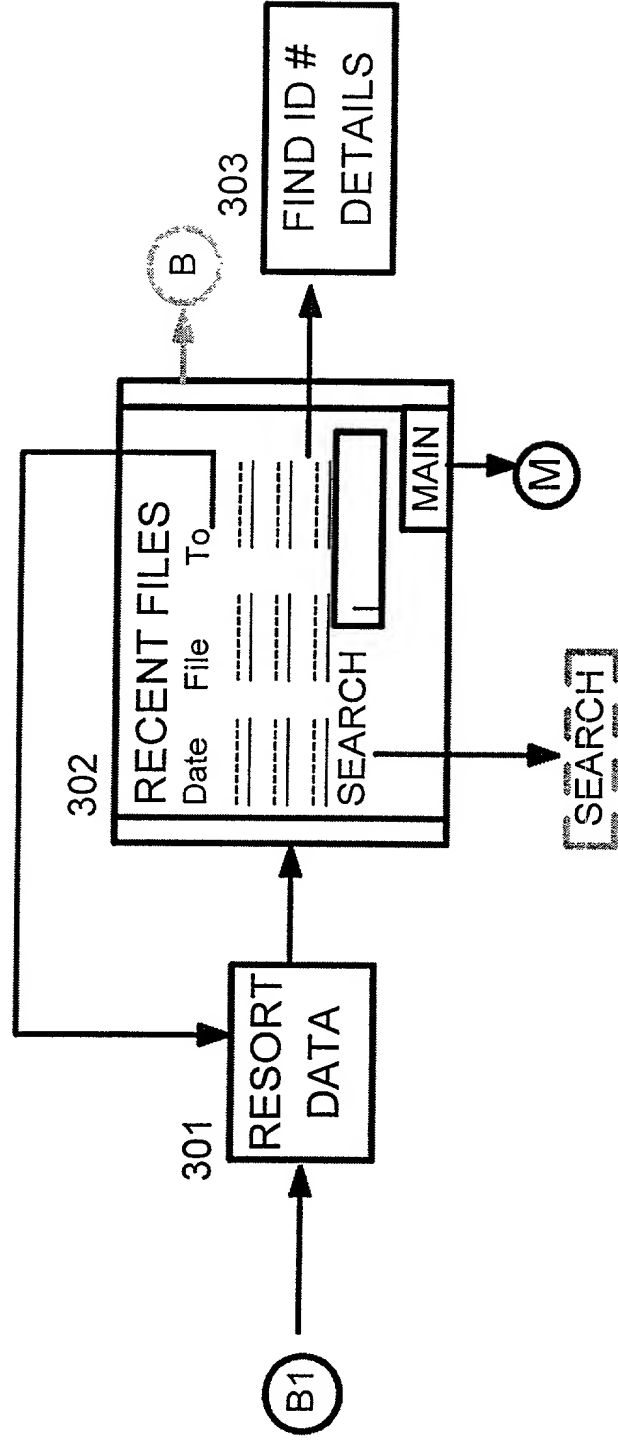


FIGURE 3-B-1



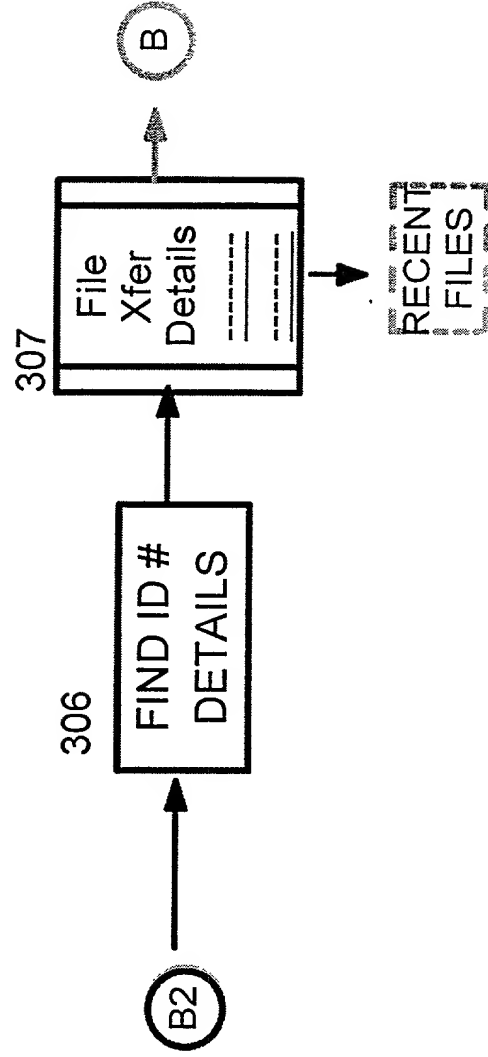


FIGURE 3-B-2

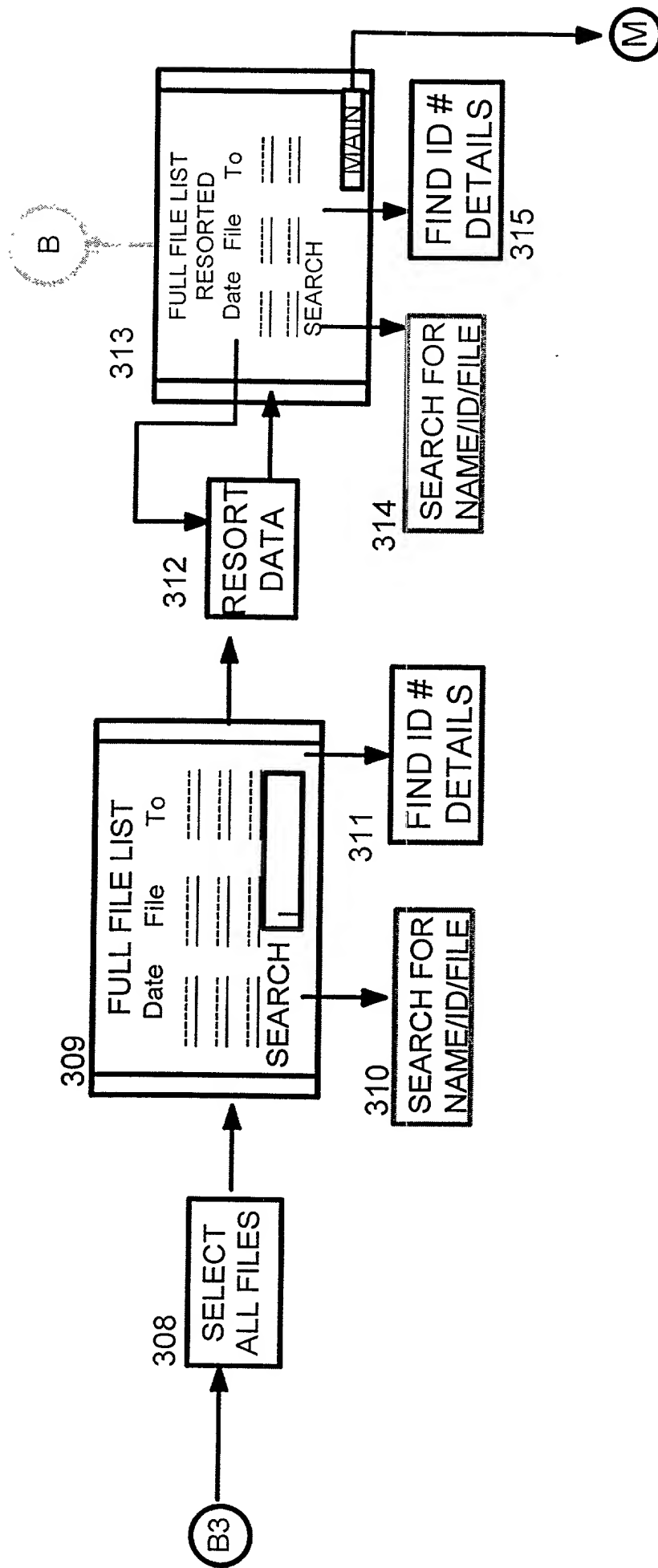


FIGURE 3-B-3

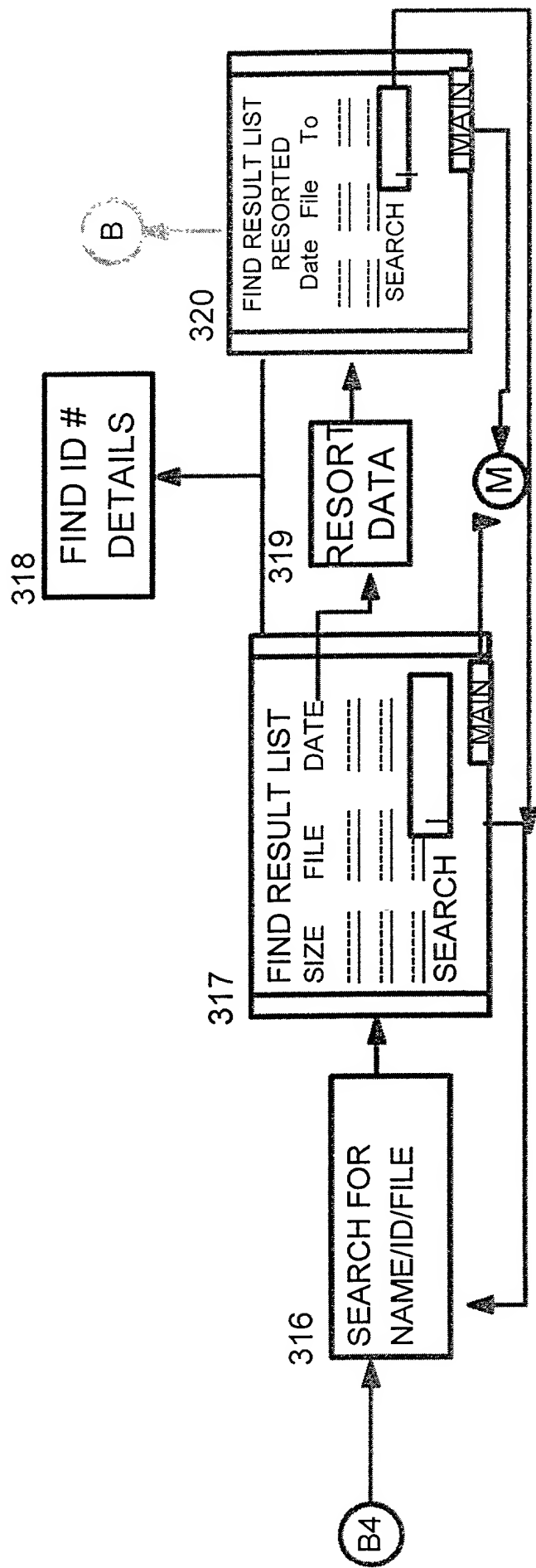


FIGURE 3-B-4

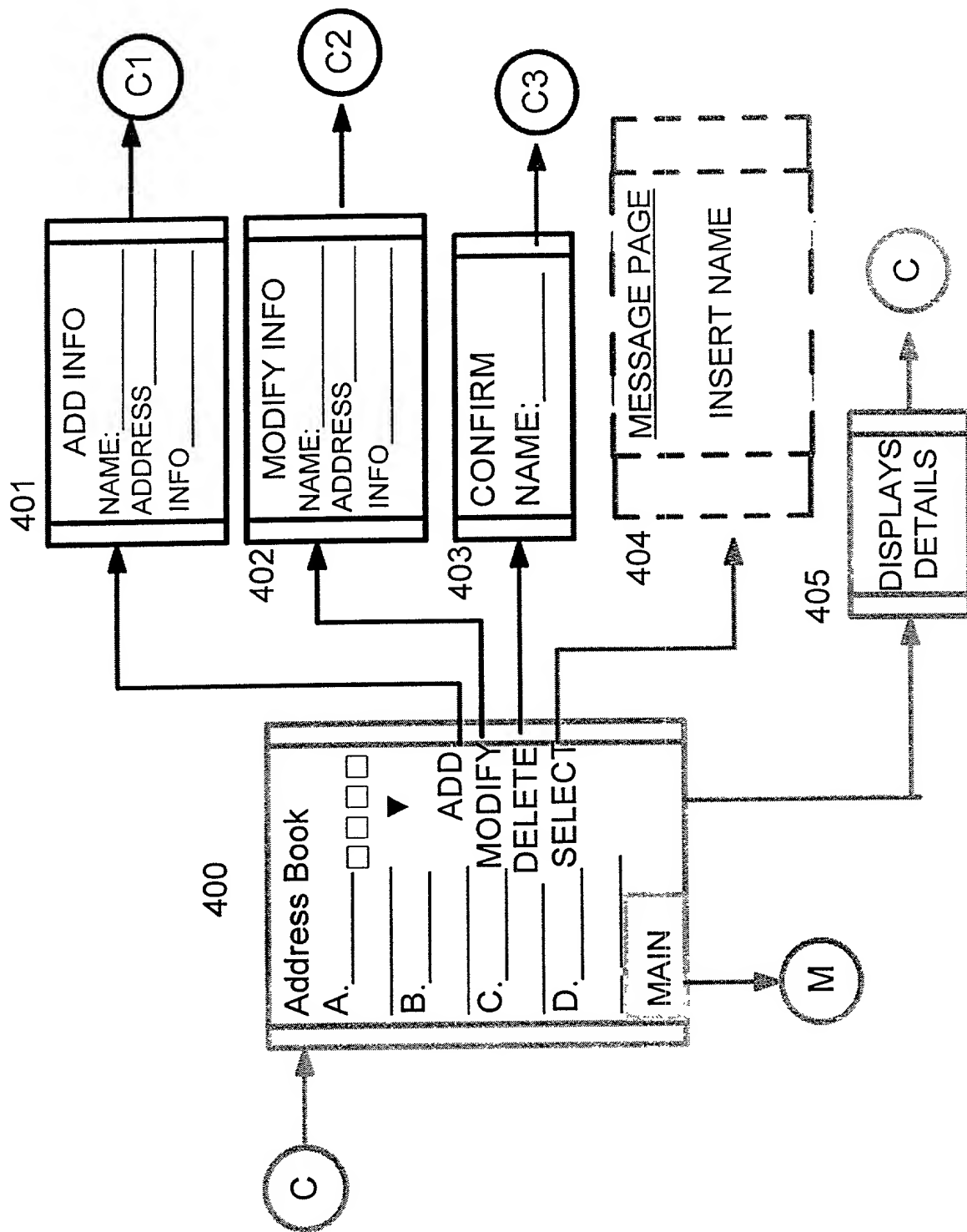


FIGURE 3-C

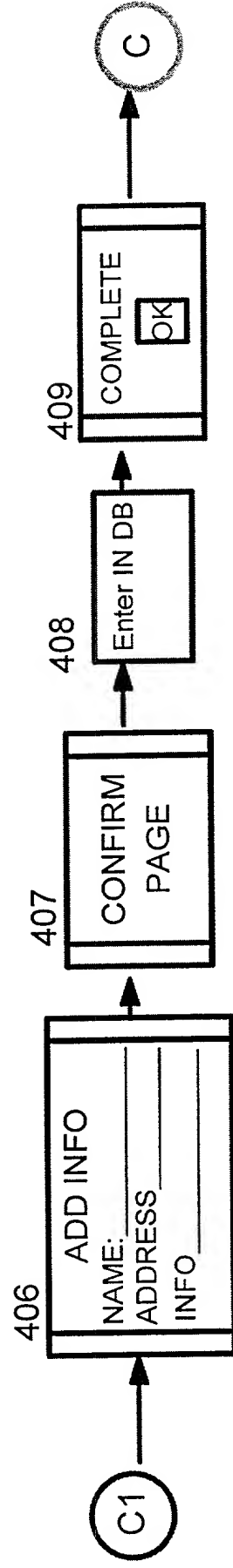


FIGURE 3-C-1

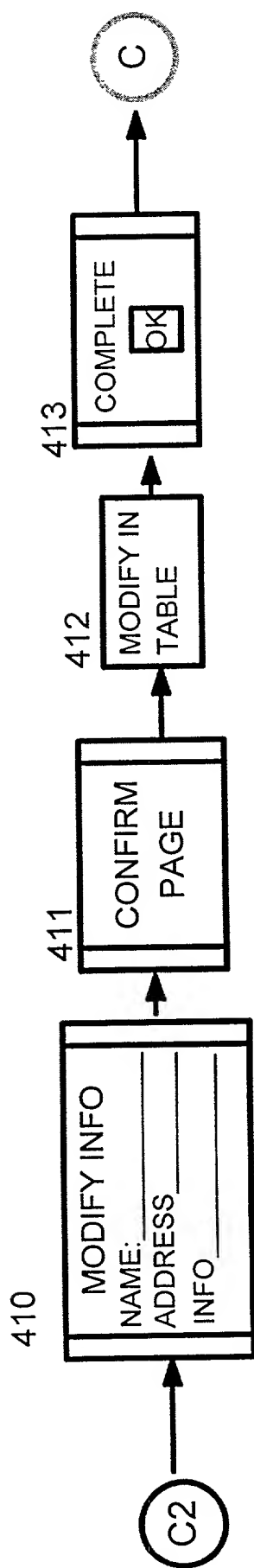


FIGURE 3-C-2

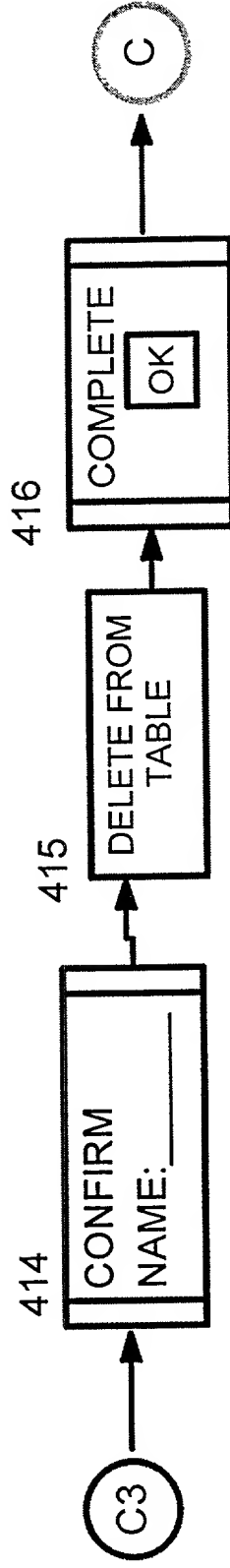
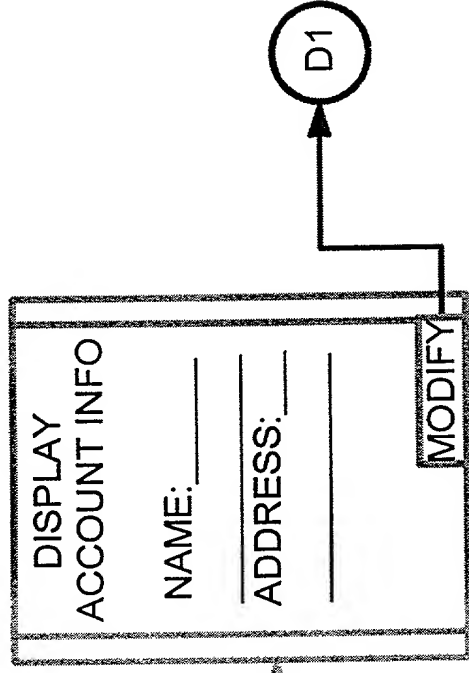


FIGURE 3-C-3

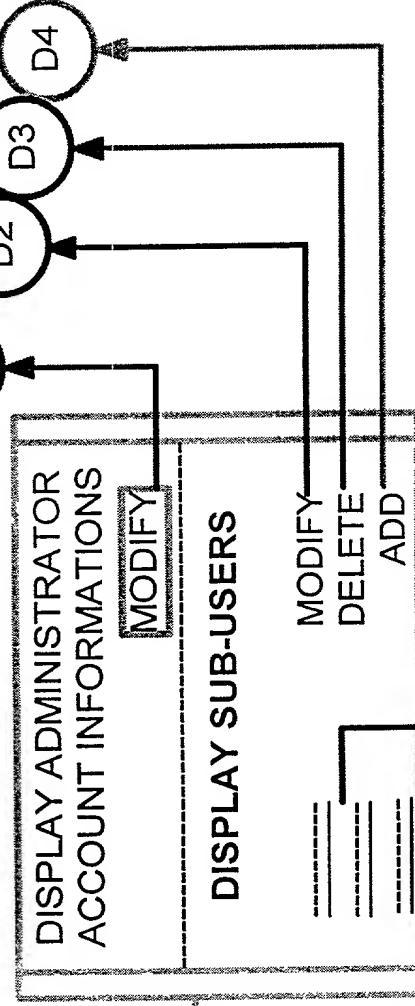
500



D1

D

501



D1

D2

D3

D4

D5

FIGURE 3-D



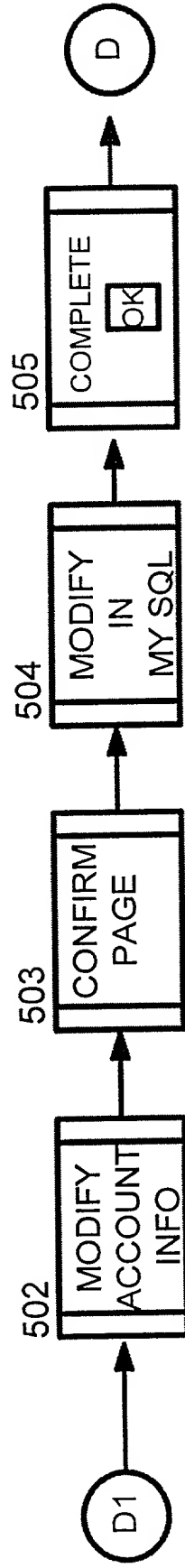


FIGURE 3-D-1

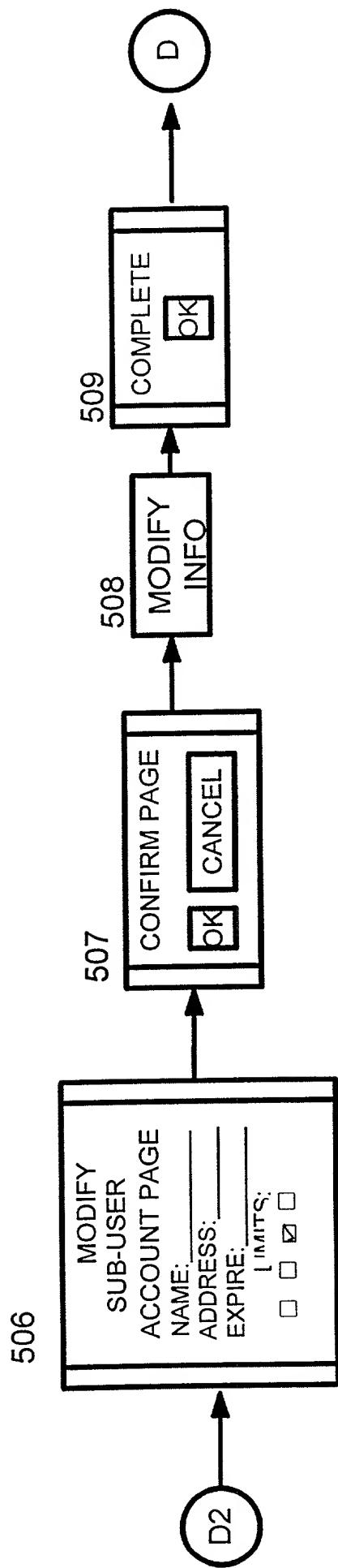


FIGURE 3-D-2

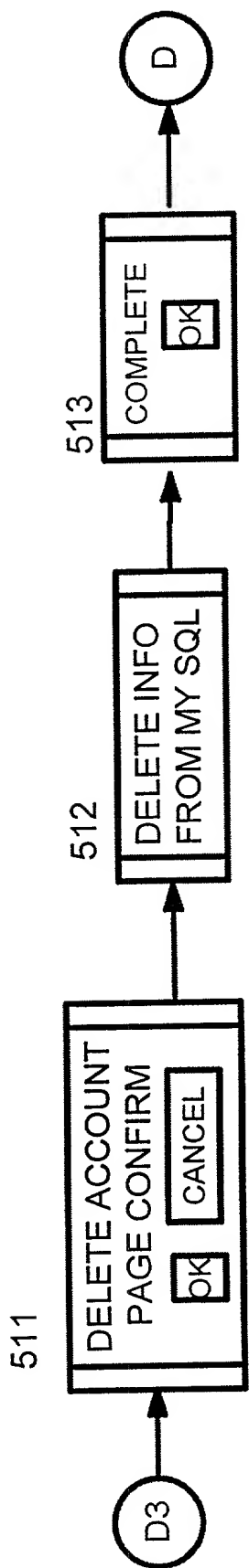


FIGURE 3-D-3

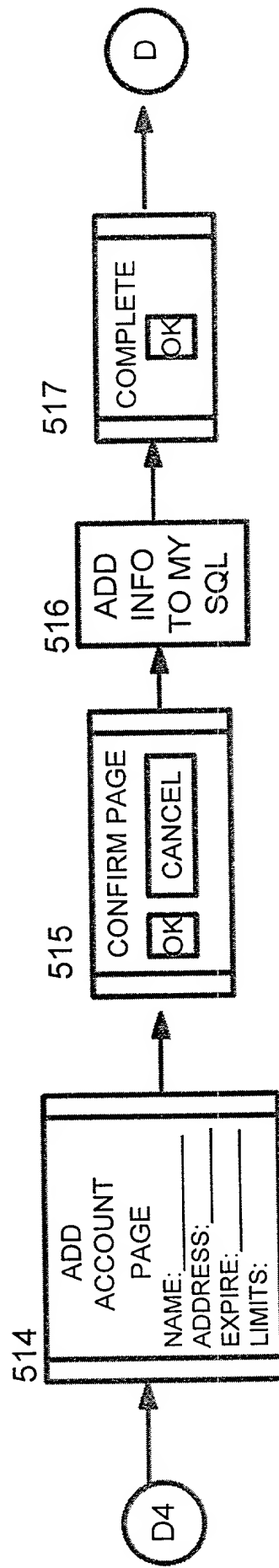


FIGURE 3-D-4

518

D5

SUB-USERS  
ACCOUNT  
DETAILS PAGE

NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
EXPIRE: \_\_\_\_\_

LIMITS:  
☐ ☐ ☒ ☐

FIGURE 3-D-5

FIG. 4

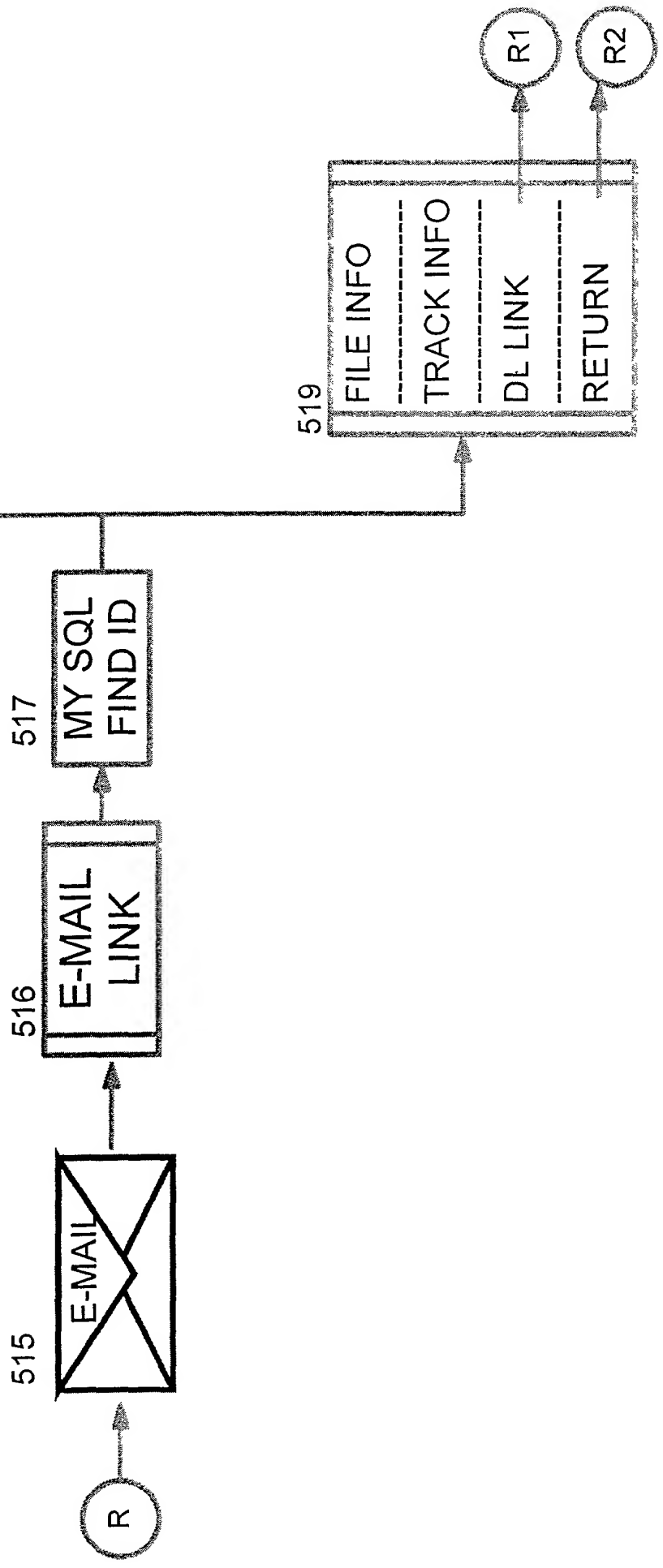


FIGURE 4

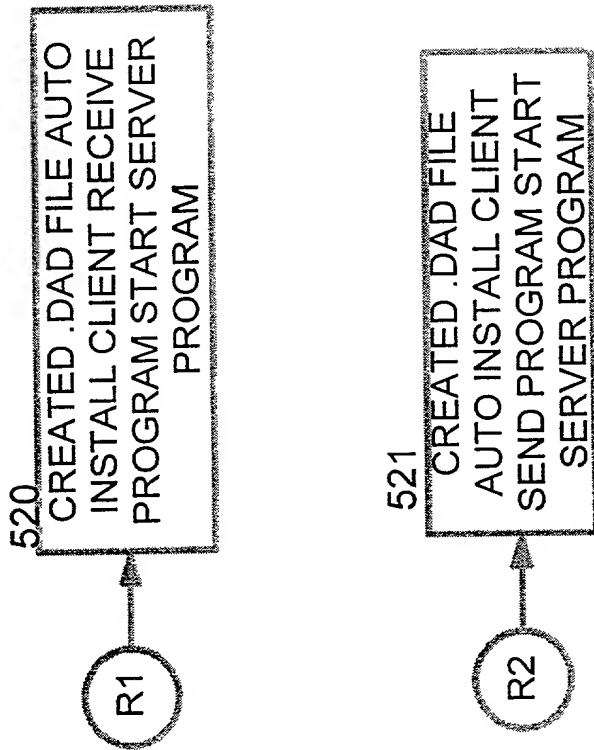
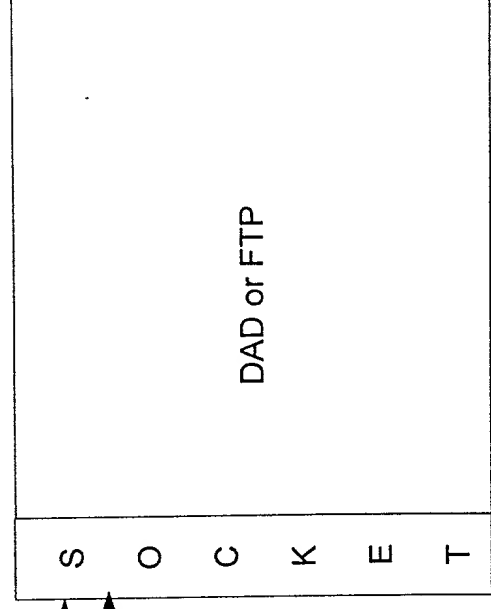
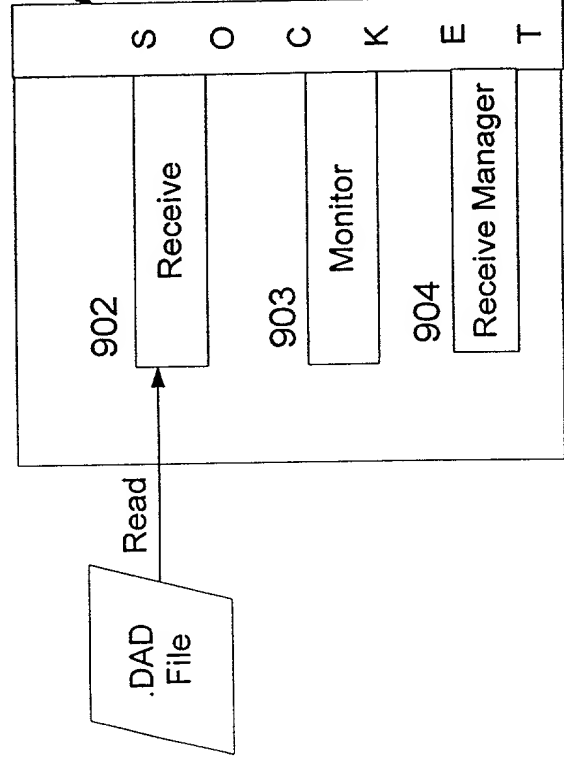
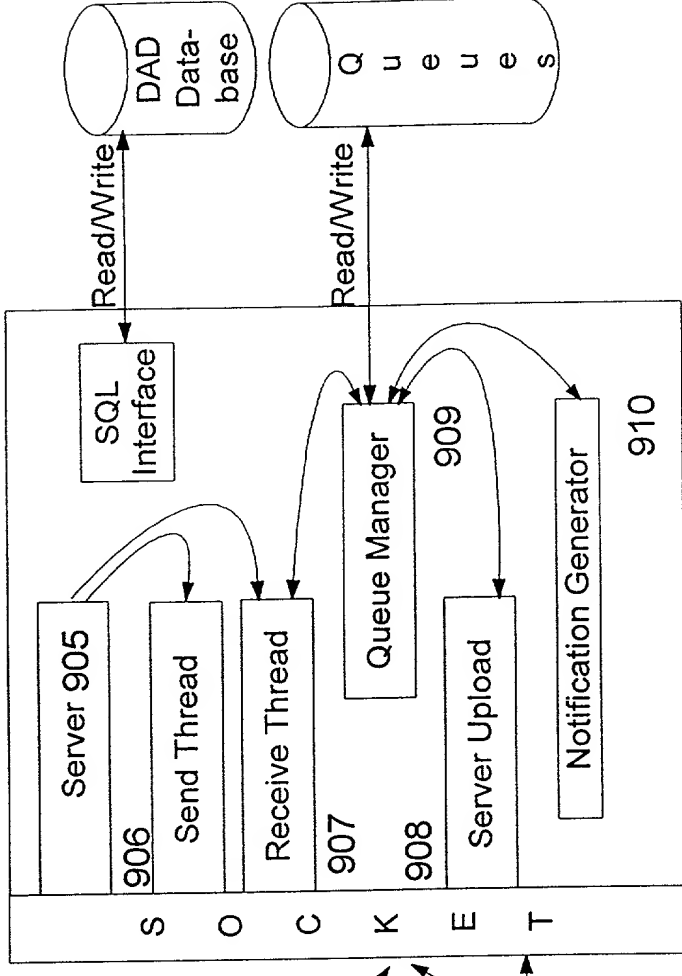
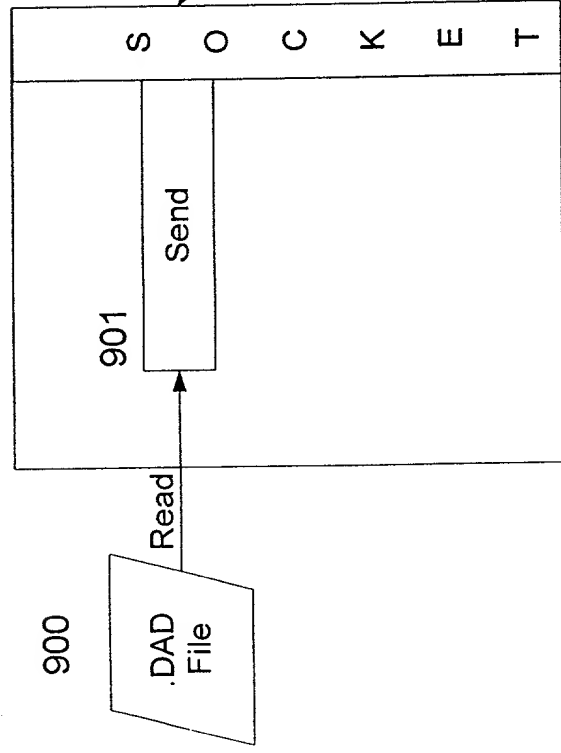


FIGURE 4-1





# Client Send

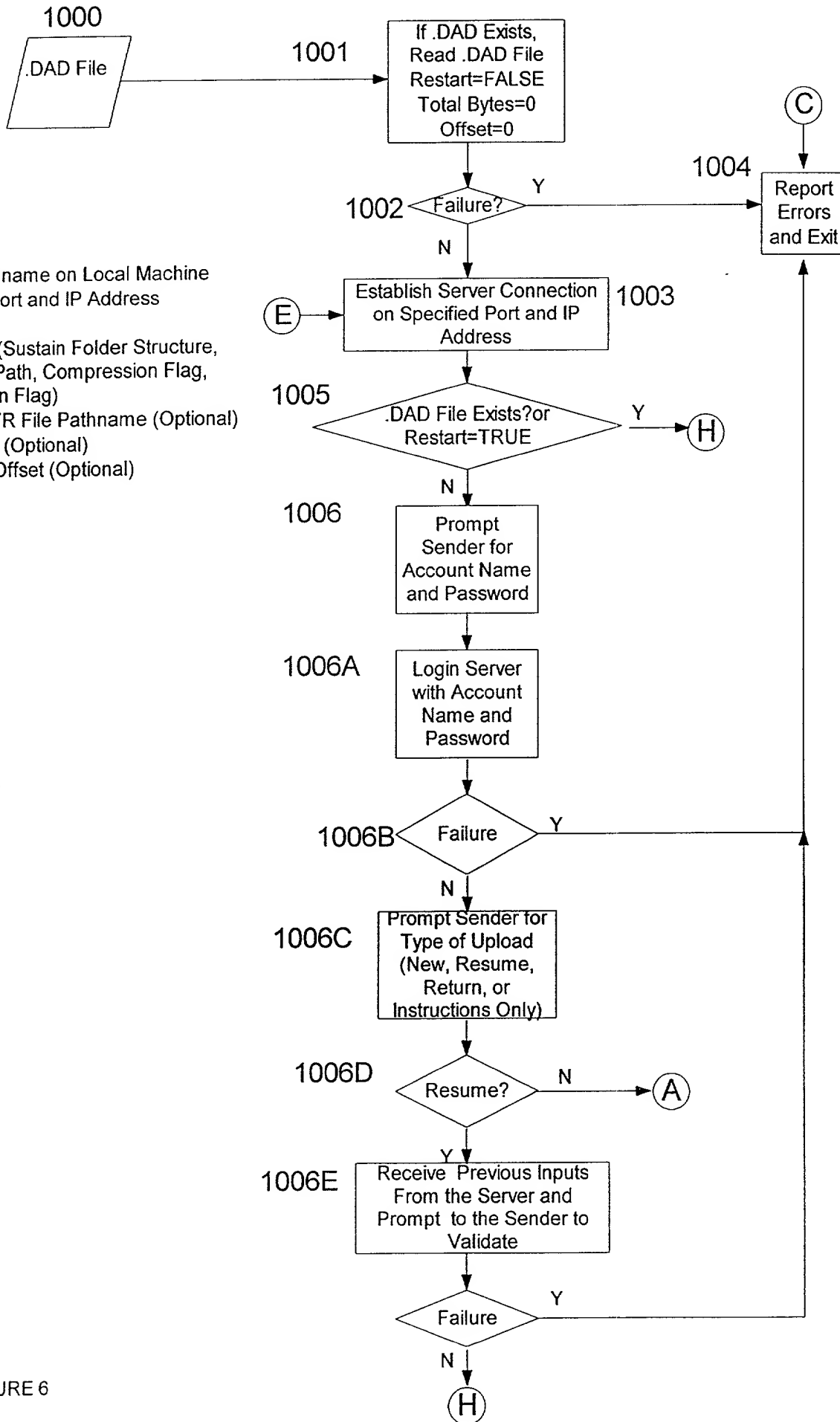


FIGURE 6

- File Pathname on Local Machine
- Server Port and IP Address
- PID
- Options (Sustain Folder Structure, Relative Path, Compression Flag, Encryption Flag)
- Local XFR File Pathname (Optional)
- File Size (Optional)
- Restart Offset (Optional)

Downloaded from ascelibrary.org by Seattle University on 06/16/14

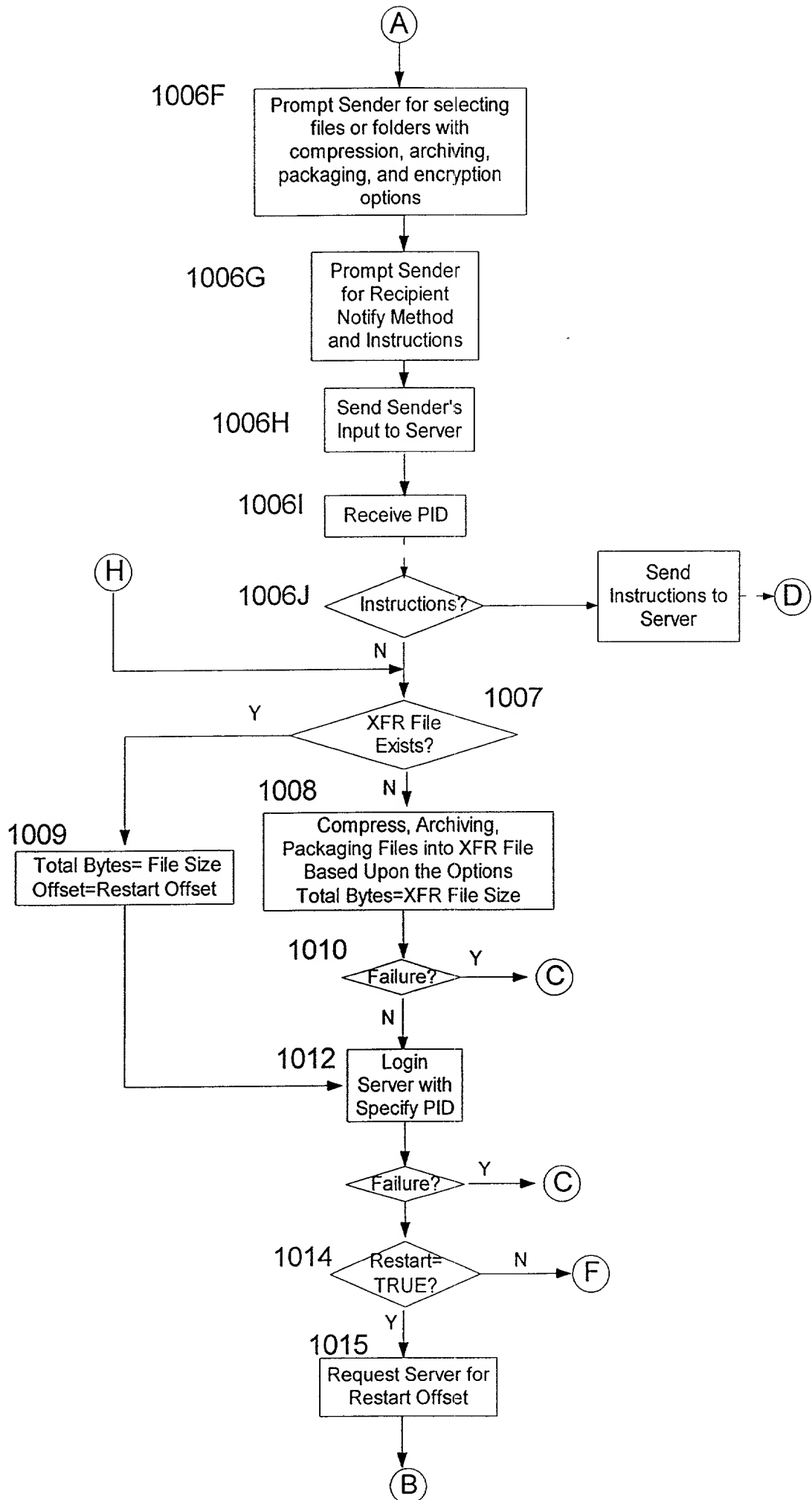


FIGURE 6-1

```

graph TD
    B((B)) --> 1017[Receive Restart Offset]
    1017 --> 1019{Restart Offset=Total Bytes?}
    1019 -- Y --> G((G))
    1019 -- N --> 1020{Restart Offset>Total Bytes?}
    1020 -- Y --> C((C))
    1020 -- N --> 1021[Offset=Restart Offset]
    1021 --> 1022[Send XFR File Name, Total Bytes, Offset to Server]
    F((F)) --> 1022
    1022 --> 1024[Receive Response]
    1024 --> 1025{Positive Response?}
    1025 -- N --> C((C))
    1025 -- Y --> 1026[Start Progress Bar with Cancel Button]
    1026 --> 1027[Send XFR File Starting with Offset with Socket]
    1027 --> 1030{Failure?}
    1030 -- Y --> 1029{Time Out?}
    1029 --> 1031{>Retry Limit?}
    1031 -- N --> 1034[Set Restart]
    1034 --> E((E))
    1031 -- Y --> 1032[Update Offset With Progress Indicator]
    1032 --> 1033{More Data?}
    1033 -- Y --> 1032
    1033 -- N --> 1028{Cancel?}
    1028 -- Y --> C((C))
    1028 -- N --> 1027
    1033 --> 1032
    1032 --> D((D))

```

1

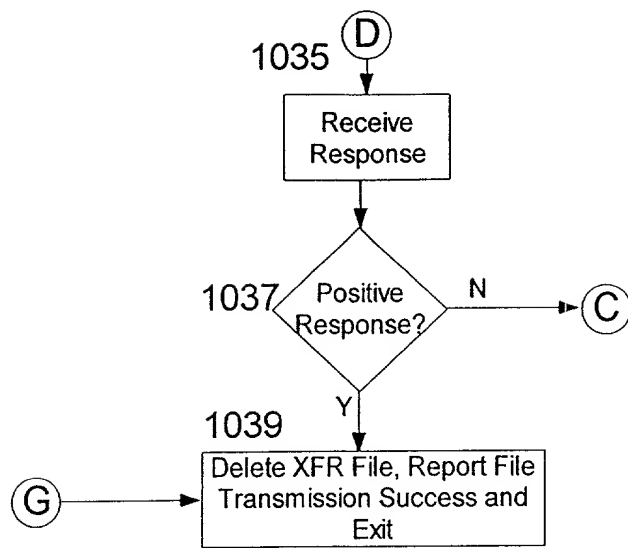


FIGURE 6-3

# Client Receive

- Server Port and IP Address
- PID
- Options (Sustain Folder Structure, Relative Path, Compression Flag, Encryption Flag, and Installation)
- XFR File Pathname
- File Size
- Type of Protocol (DAD or FTP)
- FTP Protocol (User Name, Password, Account, Initial Directory and Firewall)
- Primary Server Port and IP Address

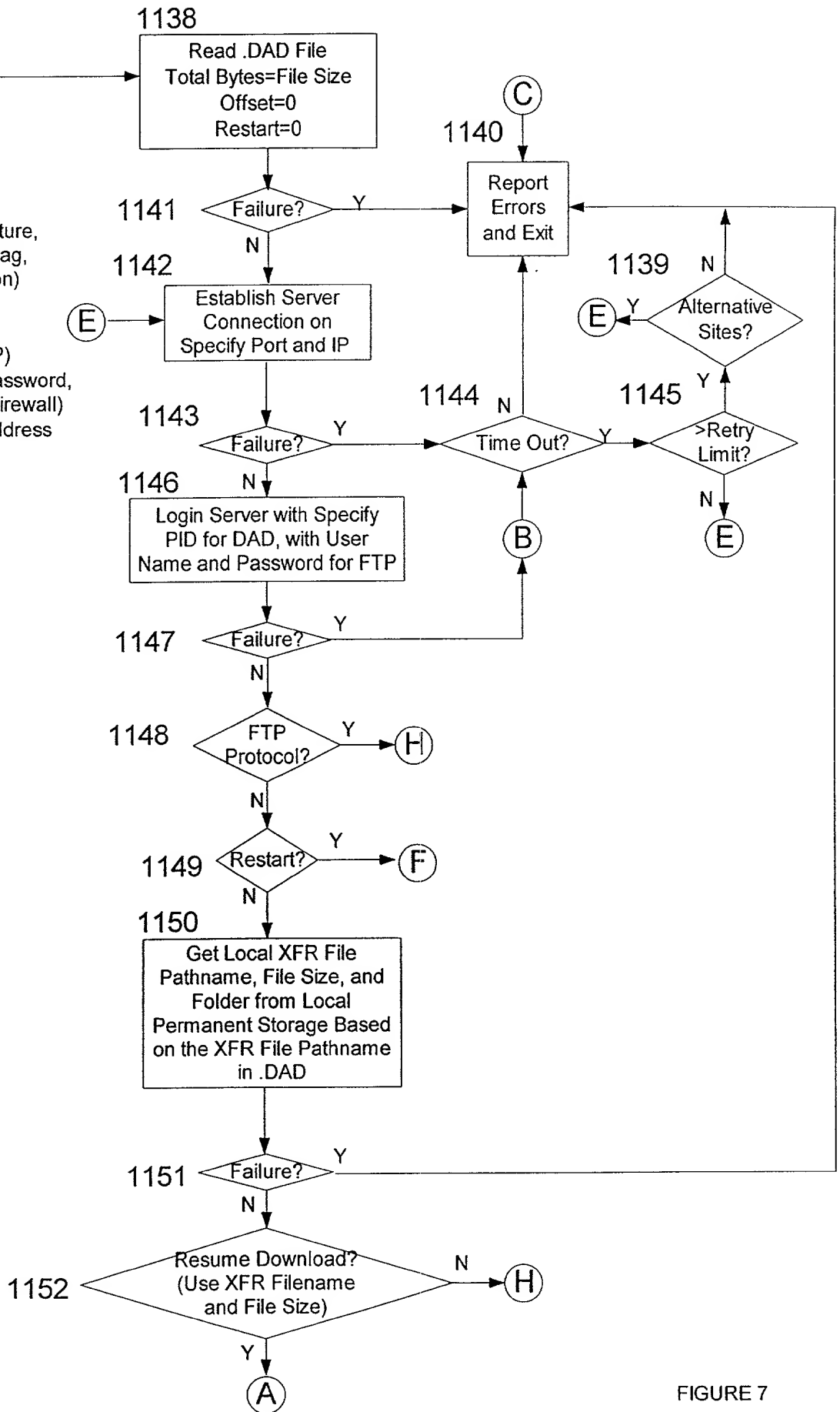


FIGURE 7

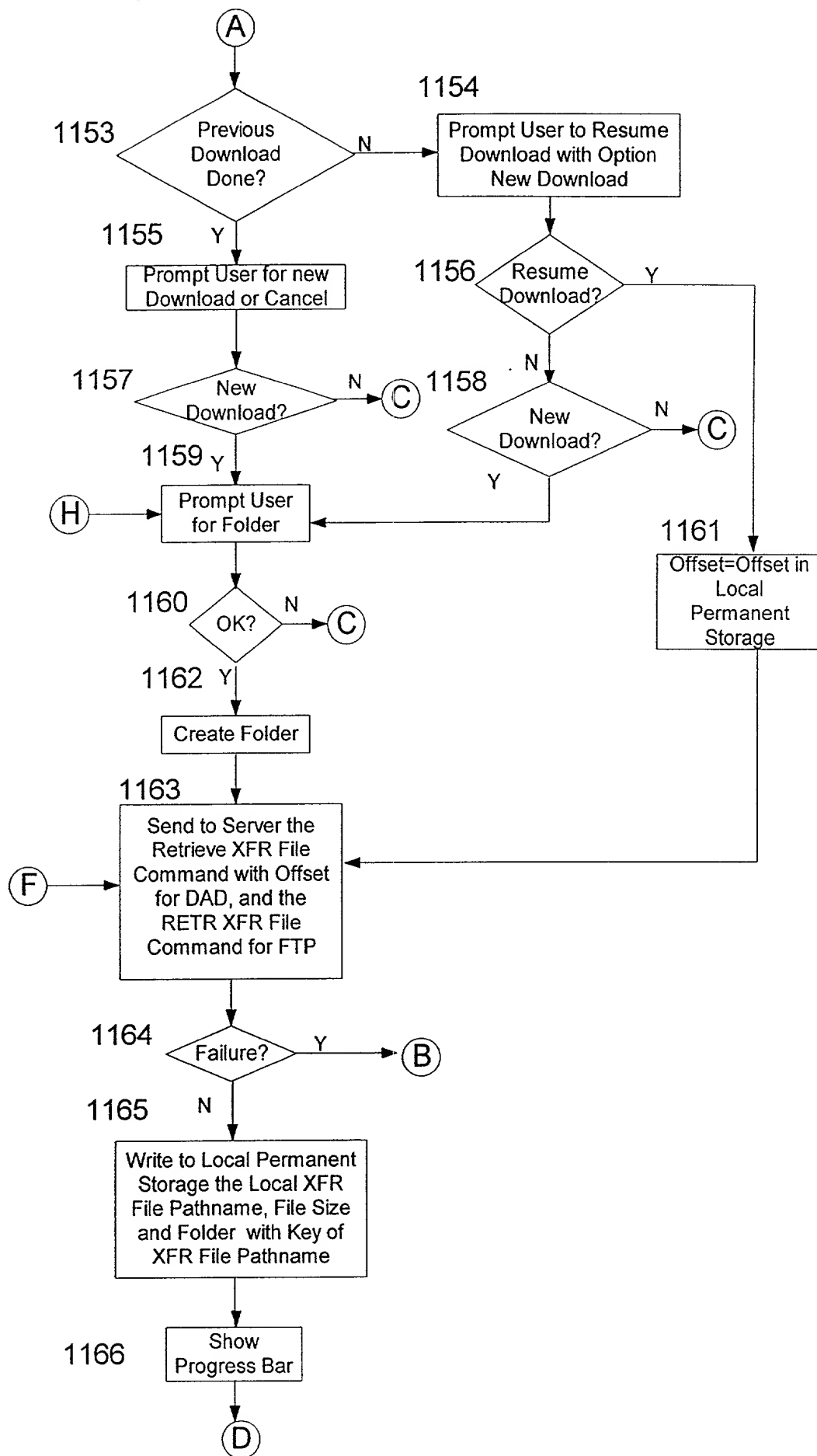


FIGURE 7-1

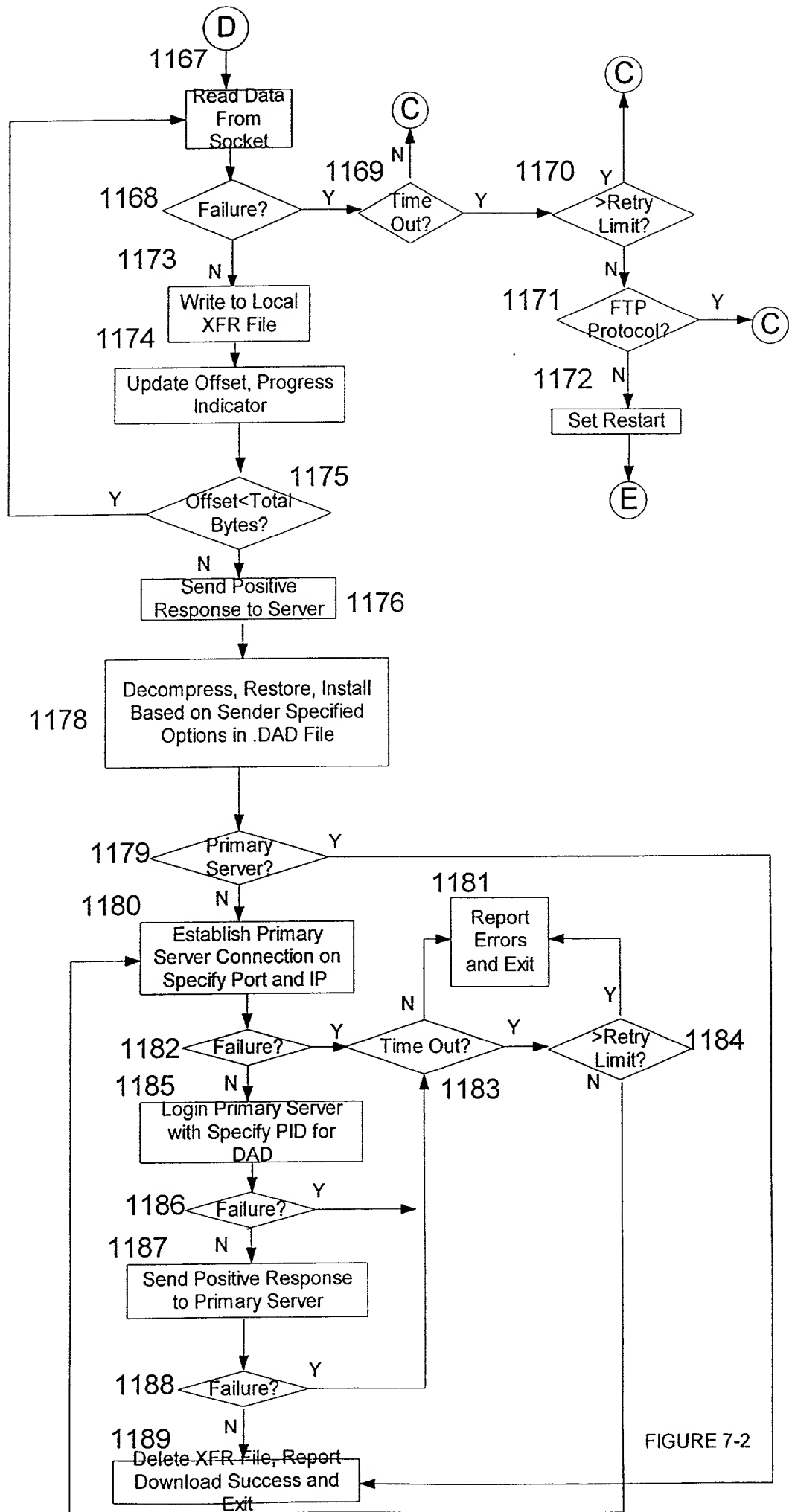


FIGURE 7-2

# Server

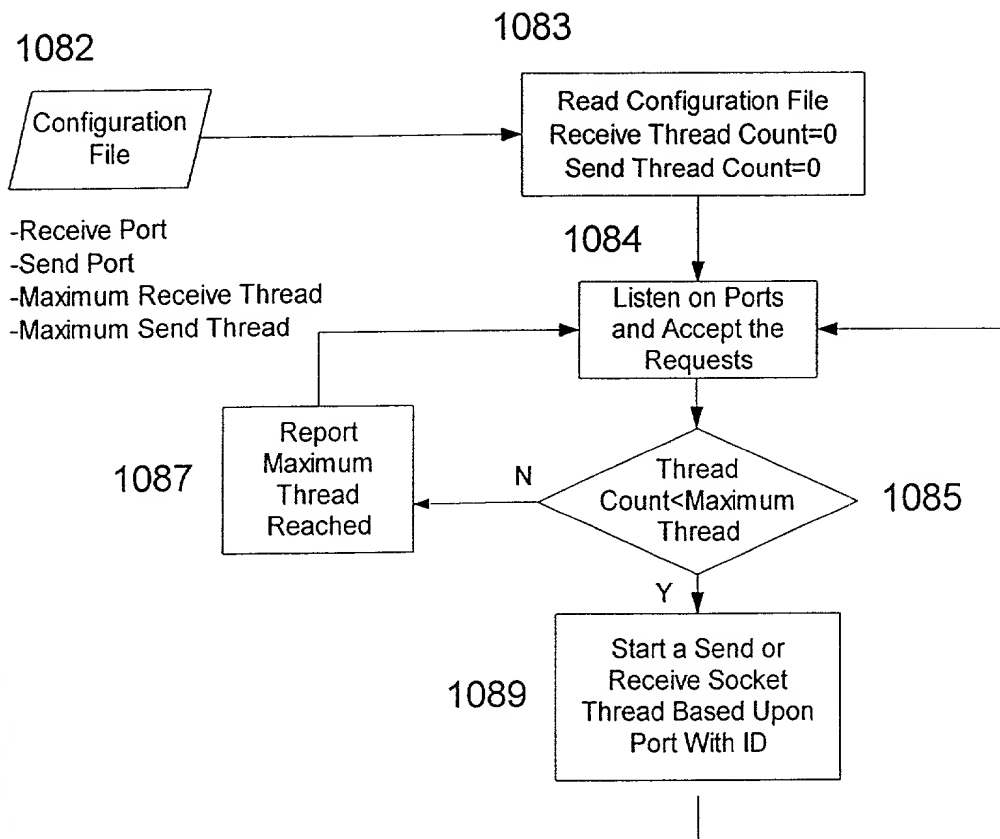


FIGURE 8



# Server Receive Thread

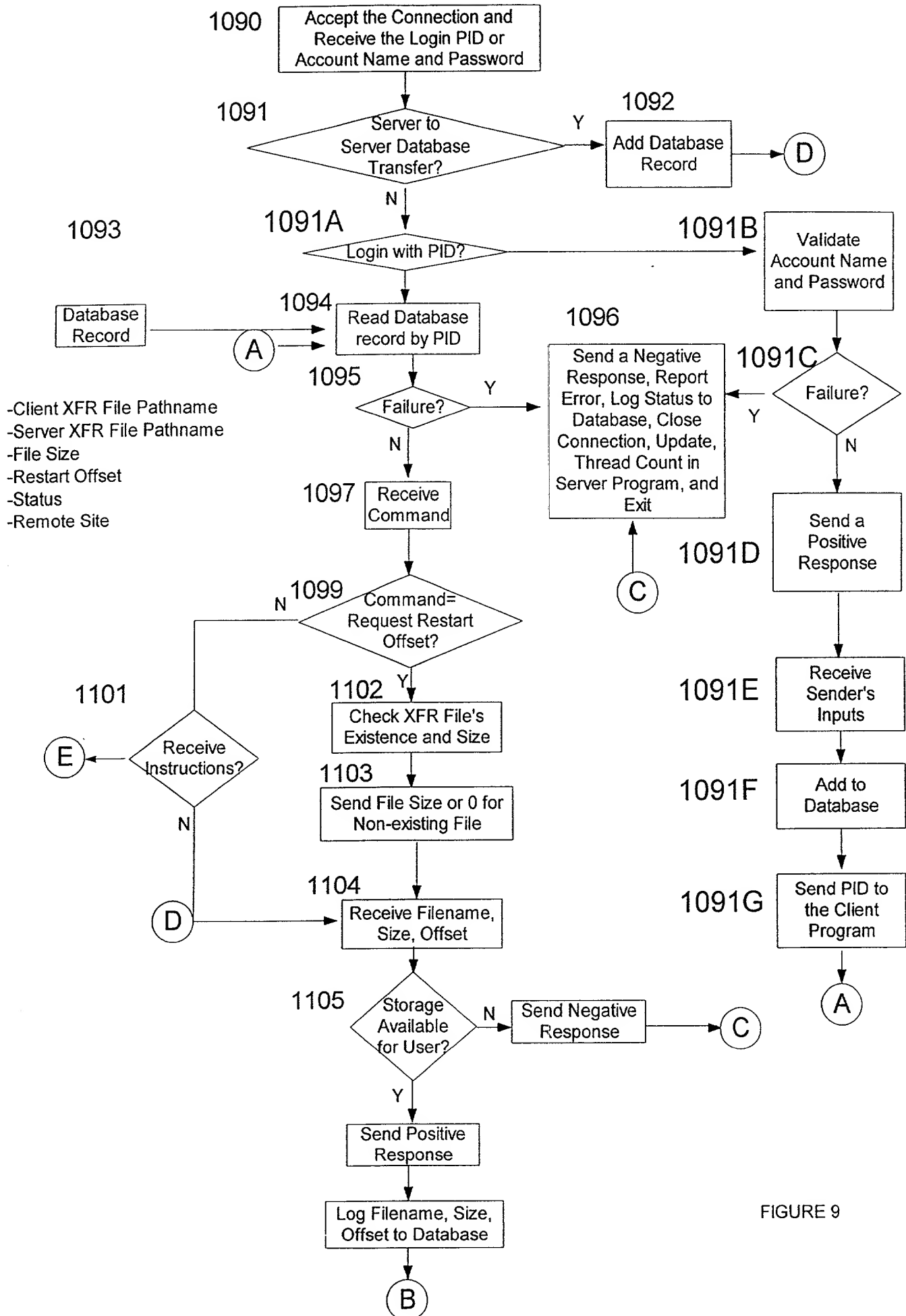


FIGURE 9

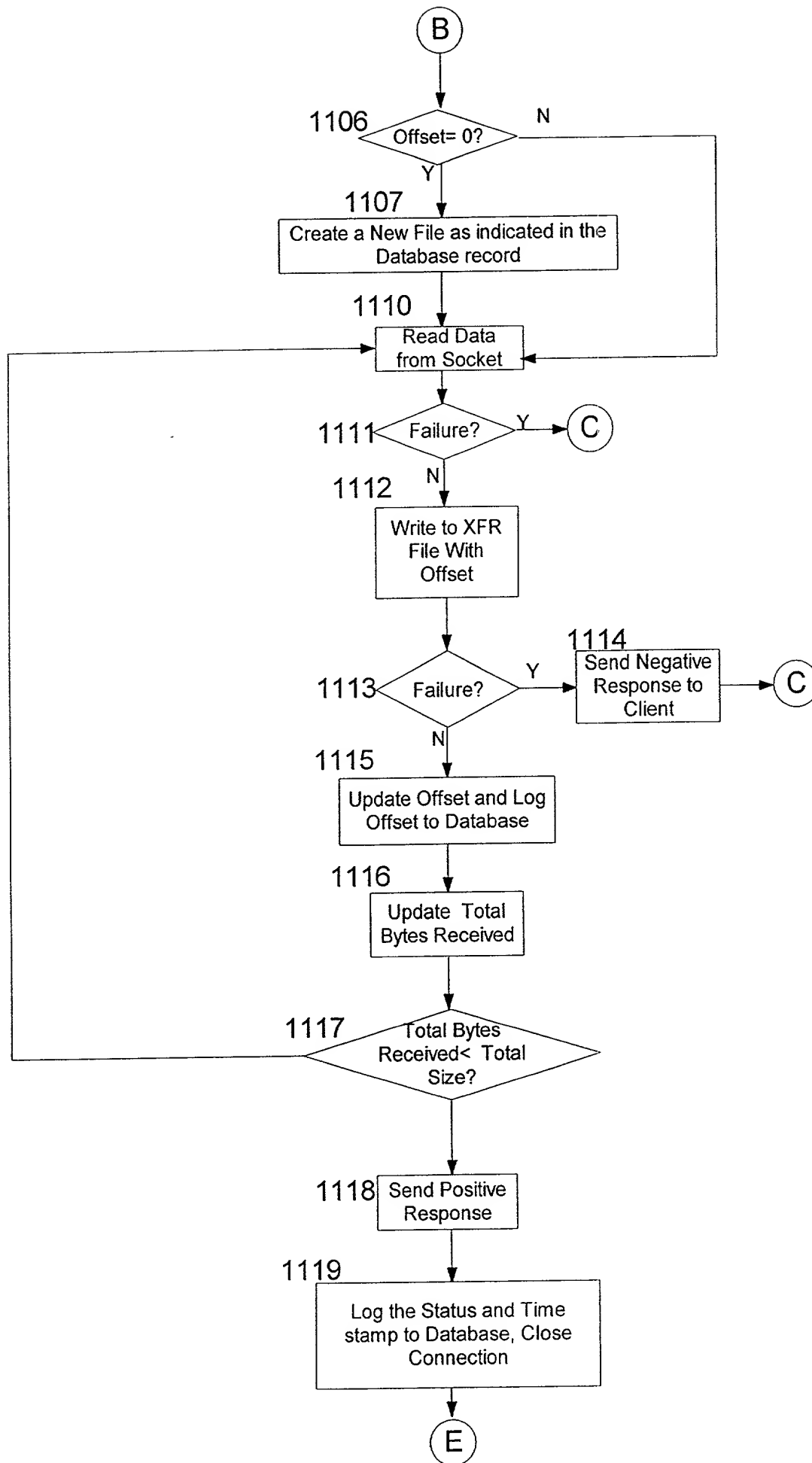


FIGURE 9 -1

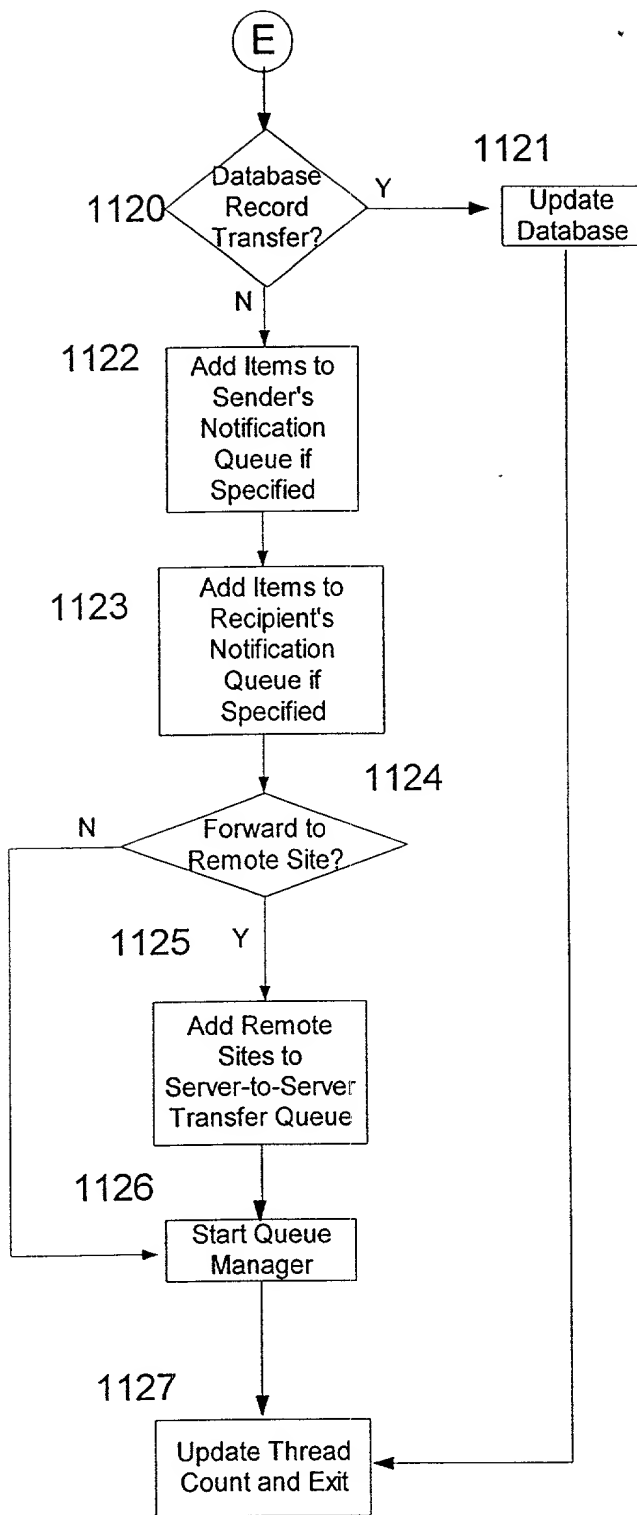


FIGURE 9-2

# Server Send Thread

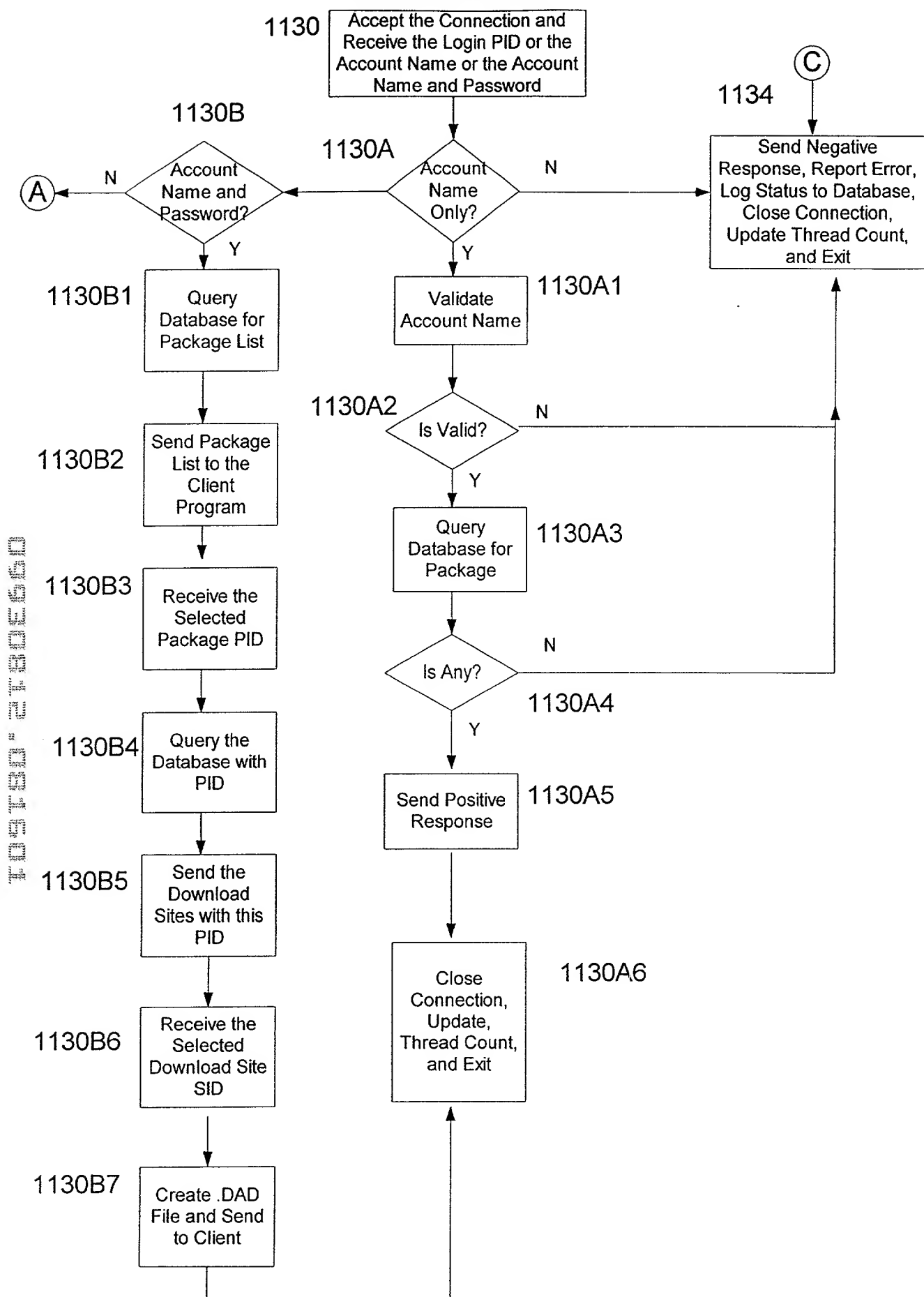


FIGURE 10

```

graph TD
    A((A)) --> 1131[Database Record]
    1131 --> 1132[Read Database record by PID Total Bytes= File Size]
    1132 --> 1133{Failure?}
    1133 -- Y --> C((C))
    1133 -- N --> 1135[Receive XFR File Pathname, Offset From Client]
    1135 --> 1136{Failure?}
    1136 -- Y --> C
    1136 -- N --> 1137[Read XFR File]
    1137 --> 1138[Send Data Starting Offset to Socket]
    1138 --> 1139{Failure?}
    1139 -- Y --> C
    1139 -- N --> 1140[Update Offset]
    1140 --> 1141{Offset < Total Bytes?}
    1141 -- Y --> 1138
    1141 -- N --> 1142[Receive Response]
    1142 --> 1144{Failure?}
    1144 -- Y --> C
    1144 -- N --> 1145{Positive?}
    1145 -- N --> C
    1145 -- Y --> 1146[Update Database, Close Connection, Update Thread Count, and Exit]

```

FIGURE 10-1

# Server to Server Upload

- Server Port and IP Address
- ID
- Type of Protocol (DAD or FTP)
- Options (Sustain Folder Structure, Relative Path, Compression Flag, Encryption Flag)
- XFR File Pathname (Optional)
- File Size (Optional)
- Restart Offset (Optional)
- FTP Protocol (User Name, Password, Account, Initial Directory and Firewall)
- S

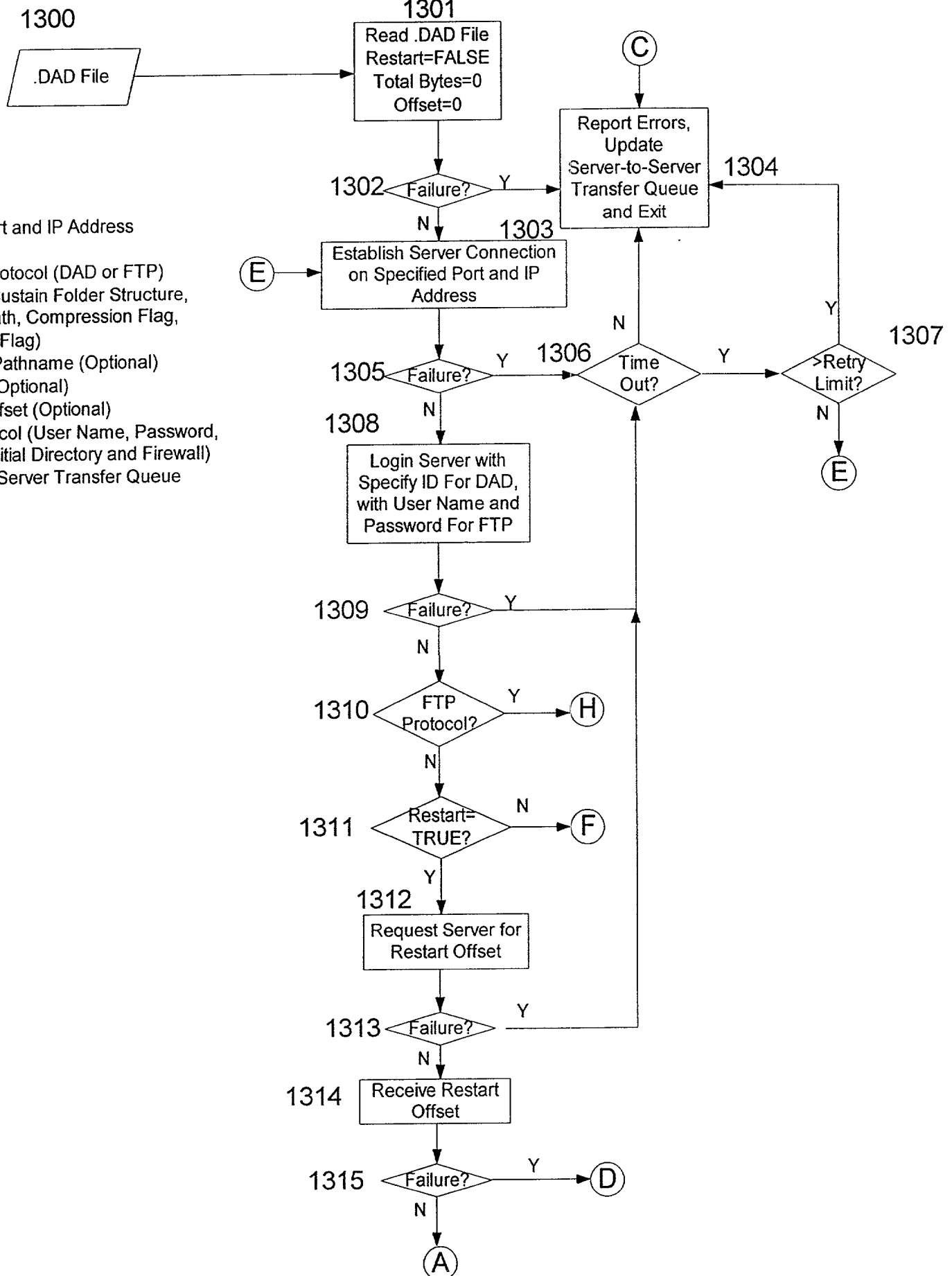


FIGURE 11

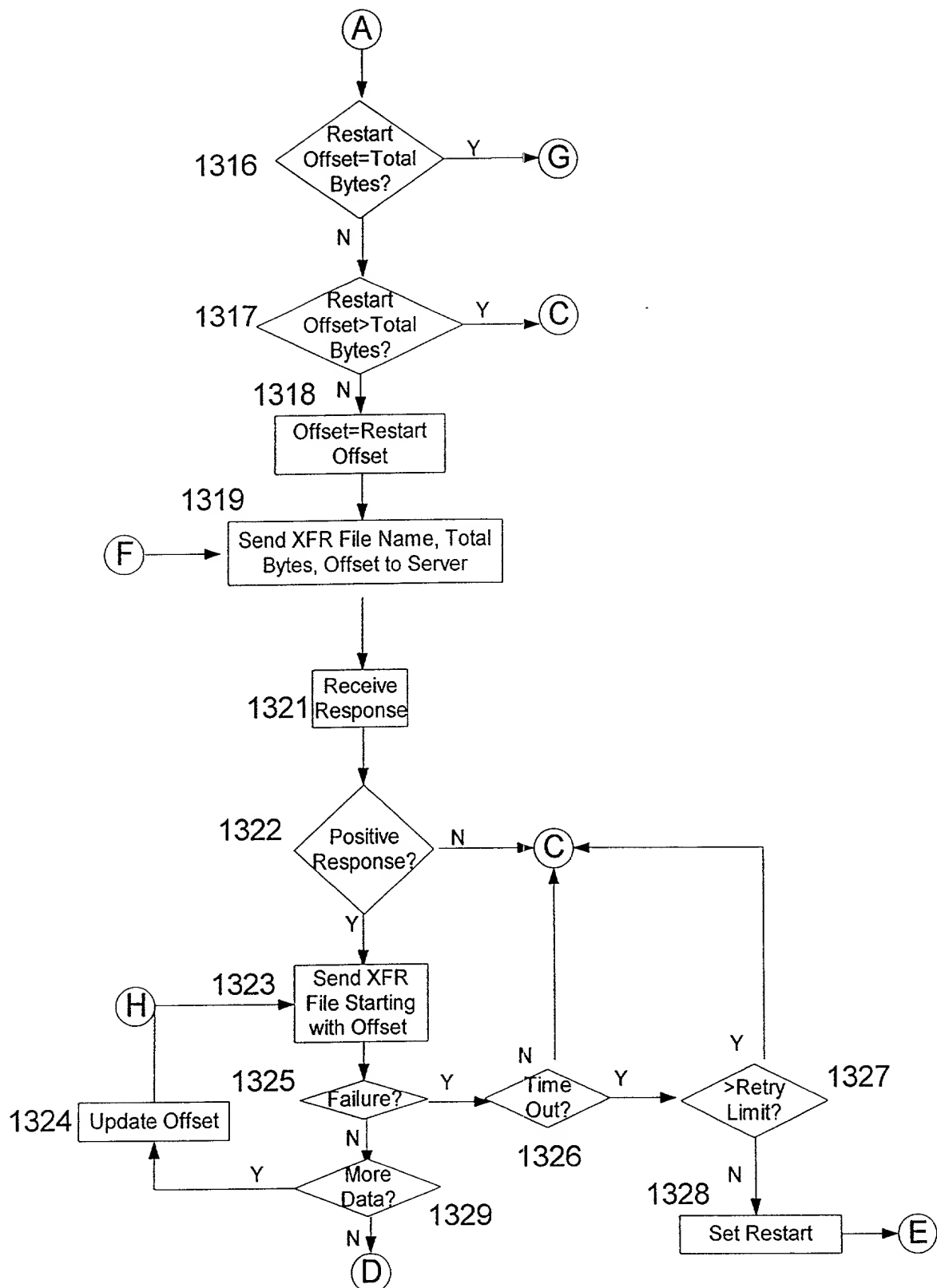


FIGURE 11.1

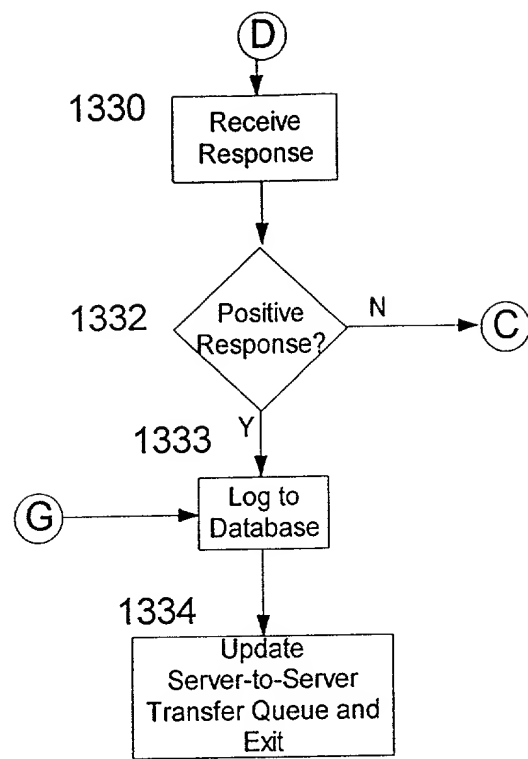


FIGURE11.2



# Client Monitor

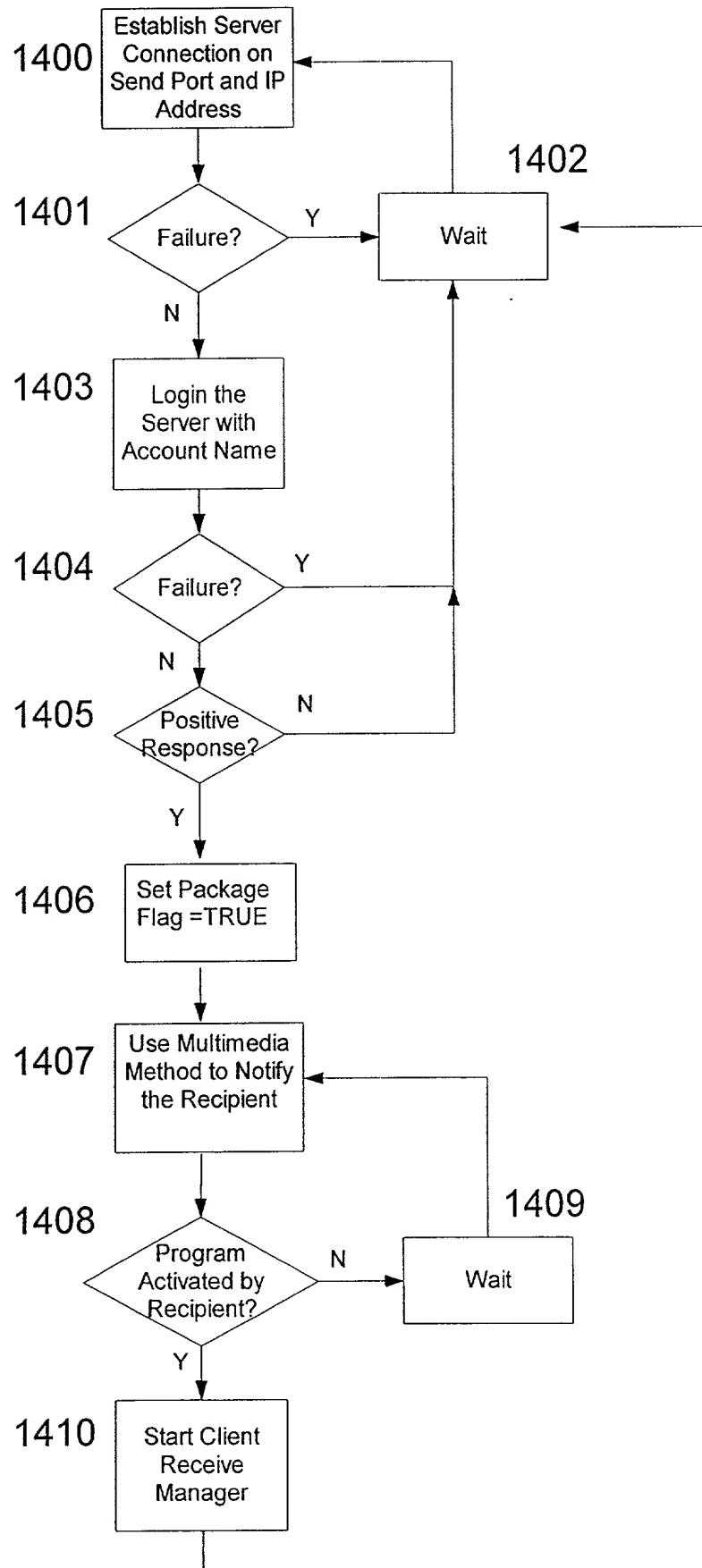


FIGURE 12

# Client Receive Manager

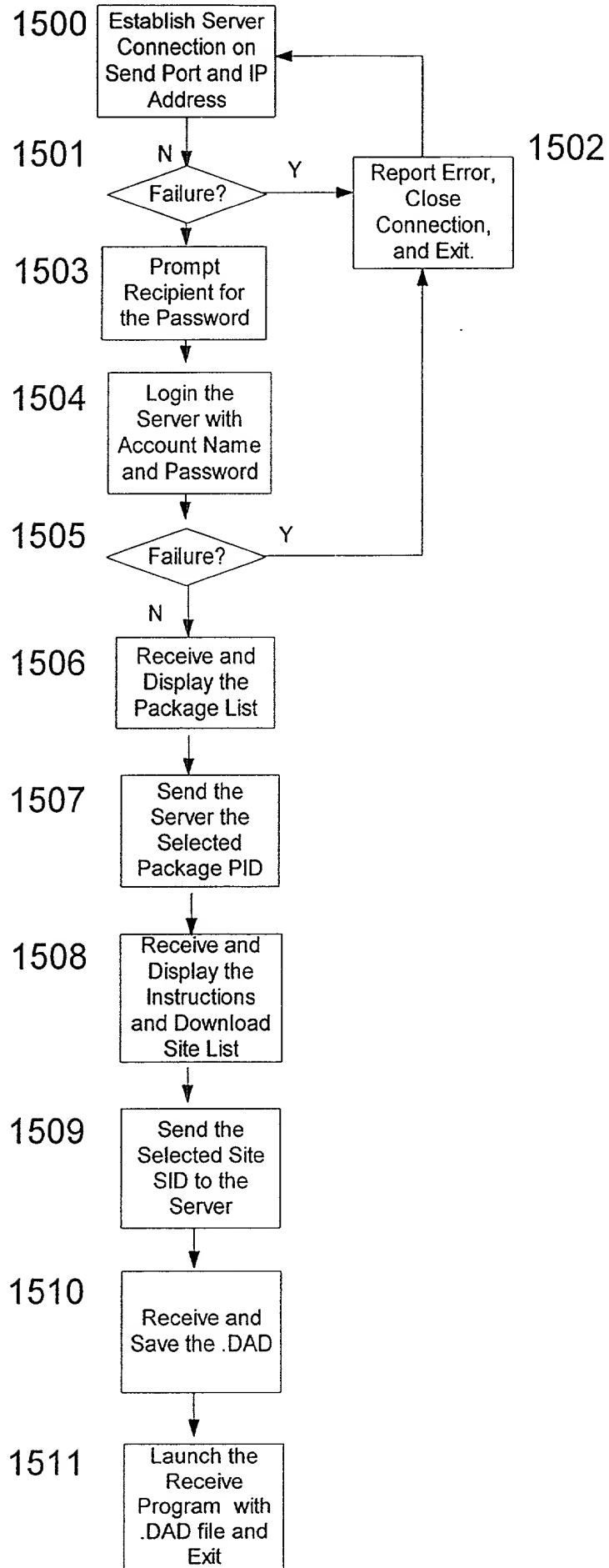


FIGURE 13